

DAILY METAL REPORTER

MONTHLY SUPPLEMENT

METALS

Published Since 1929

In This Issue

STATUS OF ALUMINUM METAL

By W. KEITH BUCK, Chief
Minerals Resources Division
Department of Mines, Ottawa

ALUMINUM USE TO EXPAND

By S. S. INCH, Executive Vice President
Kaiser Aluminum & Chemical Corp.

DOMESTIC METAL MARKET REVIEW

WASHINGTON REPORT

METAL STATISTICS

JUNE
1959

Hot-Dip Galvanizing Replaces Painting

**...and Proves A Life Preserver
For Highway Life Guards**

It is estimated that road building to the extent of six billion dollars will make 1959 the biggest highway construction year since Congress, in 1956, authorized the 41,000 mile interstate highway system.

Last year, as a part of this continuing program, 11 miles of hot-dipped galvanized guard rail were installed on the Pennsylvania Turnpike near Somerset, Pa. The rail was galvanized after fabrication and delivered to the site as needed. Under normal conditions, construction crews installed an average of 3000 feet per day. For complete protection against atmospheric corrosion, galvanized bolts were used to fasten the rails in place. This type of double faced guard rail has become increasingly popular especially on older highways where narrow medial strips are a hazard.

Noteworthy is the proven fact that the ultimate cost of hot-dip galvanizing is lower than painting because it eliminates the recurrent expense of *re-painting*.



Here is an example

The hot-dip galvanized bridge railing shown here was installed on the Merritt Parkway near Milford, Conn. in 1938. In the ensuing 20 years it has retained its appearance and strength without painting. This is just one of the many installations where galvanized steel is saving the nation's Highway Departments millions of maintenance dollars every year. Thanks to the protective zinc coating, galvanized highway structurals are immune to atmospheric corrosion and have the added advantages which the inherent strength of steel provides.

ASTM SPECIFICATIONS

Steel products to be galvanized after fabrication, and approved for installation on inter-state highways, are covered by ASTM Spec. A123 and apply to:

- Bridge Structural
- Decking and Railing
- Grating
- Fence Posts
- Sign and Reflector
- Supports
- Expansion Plates
- Rocker Plates
- Guard Rails
- Lighting Standards

NOTE: ASTM Spec. A123 corresponds in most cases to a similar specification of the American Assoc. of State Highway Officials, e.g., ASTM A123 is the same as AASHO Spec. M111-55.

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Two
LINE
Editorials

The Soviet government officially denies the rumor that Premier Khrushchev is seriously ill — and there's lots of other bad news in the papers too.

* * *

Mr. Mikoyan says he is a great admirer of Shakespeare. And does he recall how the bard pointed out that "One may smile, and smile, and be a villain"?

* * *

A headline says: "Hoffa Seeks Foot-hold in Refining Industry." Somehow, however, it's hard to think of Jimmie in connection with any kind of refinement.

* * *

It is a never-ending source of wonder that our statesmen have so many unsolved problems when our newspaper columnists know the solutions for all of them.

* * *

A prim Havana editor says that "Under the Castro regime Cuba is not a profitable field of operation for gamblers." Or barbers.

* * *

Wonder how all the seven-foot tall boys made a living in the old days before they invented basketball?

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BUSINESS IN MOTION

To our Colleagues in American Business . . .

The initials T.A. stand for Technical Advisor. This is not a fancy title for the Revere representatives who call on prospects and customers, but rather one that designates the man having that title as being thoroughly schooled and qualified to aid manufacturers in the proper selection of non-ferrous metals.

To be a Revere Technical Advisor a man must be completely conversant with metallurgy and its application to present-day production. And, if you ask him the type of question that cannot be answered on the spot then he is qualified to present the problem to Revere's Research Laboratories in a manner that will result in a satisfactory answer.

To show you how Revere's Technical Advisory Service can render you valuable aid we cite the following example: Years ago the country's oldest manufacturer of milk coolers came to Revere with the idea of building copper-lined coolers to supplant their galvanized ones which had produced corrosion and other problems.

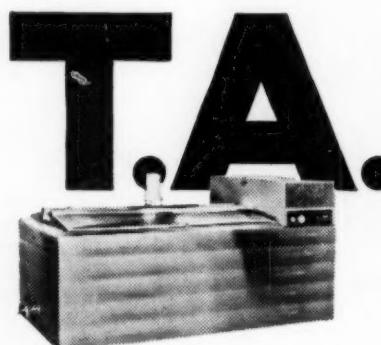
Revere's Technical Advisory Service worked with them in the designing of a satisfactory product. It took time, plenty of time, and experimentation. But the result was well worth the effort . . . a deoxidized Revere copper for the lining and Revere Copper Tube for the heat exchangers. But Revere's service did not stop there. For in order to keep down costs the manufacturer called on Revere's Technical Advisory Service, from time to time, to help them redesign their

cooler for greater efficiency and economy. Revere Research also showed this manufacturer how to overcome their soldering and welding problems.

Because of the continuing efforts of Revere's Technical Advisory Service, in connection with Revere's Research Laboratories, this manufacturer is today in the position of being able to offer a most efficient cooler at the least possible cost. Claims of this manufacturer for this cooler are that it will cool milk, uniformly from top to bottom without mechanical refrigeration and electricity. That the cream on top will never warm up. That the cooler produces continuous 24-hour cream line cooling which removes the heat from the cream line on the top as well as from the milk on the bottom. That temperature of the milk always goes down, never up, between milkings . . . not one B.T.U. of heat that passes through the side walls or the bottom ever reaches the milk.

This is still another example of how Revere's Technical Advisory Service was able to fit the metal to the job in order to produce a superior product at the least possible cost.

Practically every industry you can name is able to cite similar instances. So we suggest that no matter what your suppliers ship you, it would be a good idea to take them into your confidence and see if you cannot make a better product at lower costs by specifying exactly the *right* materials.



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Washington Report



June 15, 1959

METALS and minerals are on the Congressional agenda for consideration in the near future. Rep. Wayne N. Aspinall (Dem., Colo.), chairman of the House Committee on Interior and Insular Affairs, announced that the Subcommittee on Mines and Mining, under the chairmanship of Rep. Adam C. Powell (Dem., N. Y.), will hold open hearings on problems of the domestic mining and minerals industry beginning June 25. The hearings, to consider House Concurrent resolution 177 by Chairman Aspinall and identical measures by eight other committee members, will continue through July 2.

Chairman Aspinall's concurrent resolution would declare it the sense of Congress that it is in the national interest to foster and encourage the maintenance and development of a sound and stable domestic mining and minerals industry, the orderly discovery and development of domestic reserves, and research to promote the use of domestic materials. "Accomplishment of these goals in the interests of national security and the consuming public, without critical dependence on foreign resources, cannot be accomplished by the maintenance of national stockpiles for single defense emergencies or productive capacity based on foreign material sources," the resolution states.

The resolution also states that governmental efforts to date have not been effective, and that further delays in recovery would cause irreparable damage to mining and mineral properties, wastage of human and natural resources, and loss of productive capacity, and would have a depressing effect upon the national economy and threaten national security.

Co-sponsors of identical resolutions are Rep. Walter Rogers (Dem., Tex.), Rep. Gracie Pfost (Dem., Idaho), Rep. Adam C. Powell (Dem., N. Y.), Rep. Ed Edmondson (Dem., Okla.), Rep. Walter S. Baring (Dem., Nev.), Rep. Al Ullman (Dem., Ore.), Rep. John J. Saylor (Rep., Pa.), and Rep. J. Edgar Chenoweth (Rep., Colo.).

Stockpile Disposal Clash

While the House unit is considering ways to aid the mineral industries the Office of Civil and Defense Mobilization reportedly is drafting

legislation to make it easier to dispose of some of the material in various Government stockpiles. Such a measure would collide with a recently-introduced bill by western senators which would bolt the door on stockpiled mineral sales without Congressional consent.

The bill contemplated by OCDM, which is said to have been approved by the Budget Bureau, would establish a single National Materials Reserve Inventory which would include material now in separate stockpile categories. In the new reserve would be all material in the supplemental stockpile of foreign minerals obtained in barter deals; the Defense Production Act inventories of metals acquired under incentive price support programs; the Government's tin stockpile, and the Interior Department stocks of domestic metals bought to support market prices. The inventory also would acquire materials in the National Stockpile which are in excess of goals.

Under the proposed procedure, OCDM would be able to dispose of materials in the new reserve without Congressional approval but with 90 days notice to Congress of intention to sell. At present, commodities in the National Stockpile cannot be disposed of without Congressional consent.

Seek Bar to Sales

Meanwhile, the Senate Interior Committee is expected to consider soon a proposal requiring approval of the Senate and House Interior Committees before any materials can be sold from the billion-dollar Defense Production Act stockpile of metals and minerals.

The measure was introduced by

Senator James E. Murray (Dem., Mont.), chairman of the Senate Interior Committee and co-sponsored by other members.

The bill would give the committee power to approve or disapprove any proposal to sell or release into commercial channels defense materials bought by the Federal Government under the 1950 Defense Production Act.

The committee would require that "the plan and date of the proposed disposal have been fixed with due regard to the protection of the U. S. against avoidable loss . . . and the protection of producers, processors and customers against disruption of their usual markets."

Cite Copper Situation

Senator Murray told the Senate that recently there was a "classic example of how any irresponsible plan for the disposal of this material . . . could disrupt the market."

He said published rumors that 128,000 tons of stockpile copper would be sold caused an immediate and violent reaction. The London copper market dropped 4 cents a pound in a few days, he reported.

The bill would not prevent the sale or disposal of materials in the defense stockpile any more than in other Federal stockpiles, Senator Murray said. Its provisions are similar to those governing disposal of other stockpiles, he added.

Senator Alan Bible (Dem., Nev.), observing that the defense stockpile contained copper, aluminum, nickel, cobalt, fluorspar, manganese, asbestos, lead, mercury, mica and other materials, said:

"It is vitally important that we retain these minerals in the stockpile to avoid any action that might break the market and add further chaos to our already crippled mining communities."

Senator Frank E. Moss (Dem., Utah), also a cosponsor, said the copper market had not entirely recovered from the recent break, although Federal Government officials had announced there was no plan to sell stockpiled copper. He continued:

"Under present conditions any action that would break the market means widespread unemployment in the nation's mining areas."

Lead-Zinc Duties

Senator Murray also made news when he introduced on behalf of himself and other senators a bill providing "peril points" for lead and zinc tariffs. Under the Murray proposal, a basic tariff rate of 4.00c a pound would be imposed on lead and zinc

(Continued on Page 16)

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Review of Lead, Zinc and Copper in Canada

By W. KEITH BUCK, Chief, Mineral Resources Division,
Department of Mines and Technical Surveys, Ottawa

CURRENTLY we have 38 mines in Canada producing lead, zinc or copper, in all provinces and territories except Prince Edward Island, Nova Scotia and Alberta. All in all, the annual value to Canada of the lead, zinc and copper mining and metallurgical industries is in the order of \$10 million dollars. The lead, zinc and copper industries are of tremendous and continuing importance to Canada.

During the last two years, world attention has been focused more heavily than ever before on lead, zinc and, to a certain extent, copper, partly due to world oversupply but mainly due to United States activities in these metals. Our people have just returned from the United Nations lead-zinc meetings in New York. Although the press has reported on these meetings in some detail, I shall make some comment on them later.

Lead, Zinc and Copper Situation

I should first like to review the lead, zinc, and copper primary resource situation in Canada not only because it is the major concern of my Department but also because your Secretary specifically asked me to speak to you in this connection. He probably felt I could, more properly, comment on certain aspects of the primary industry than on certain aspects of your own secondary industry.

Canada is the fifth largest world producer of lead, ranking behind the United States, Australia, U.S.S.R. and Mexico. The production of these five countries, plus that of Peru, French Morocco and South West Africa, accounts for almost 75 per cent of the world's mine production of lead. Canada produces 8 per cent of the world's total. In smelter production of lead, Canada ranks sixth, behind the United States, U.S.S.R., Australia, Mexico and West Germany, the six countries accounting for almost 70 per cent of the world's total, Canada's share being 6 per cent.

Text of address delivered May 11, 1959 at 18th annual meeting of Canadian Secondary Materials Association in Toronto.

METALS, JUNE, 1959

Although Canada has customarily ranked second among the world's zinc producers, after the United States, our production in 1958, for the first time, exceeded that of the United States. Production from the two countries, plus that of the U. S. S. R., Australia, Mexico and Peru, accounts for about 65 per cent of world zinc output; Canada now produces 14 per cent of the total. In smelter production of zinc, Canada ranks fourth, after the United States, U.S.S.R. and Belgium. These countries, plus Germany and Poland, produce 70 per cent of the world's smelter output. Canada produces almost 8 per cent of the total. In addition, Canada is by a very considerable margin the world's largest trader in zinc.

Recovery from Complex Ores

Lead and zinc are recovered in Canada from complex lead-zinc and copper-zinc ores. There are 26 mines in regular operation at present, the smallest with a milling capacity of 50 ore tons per day, the largest with a capacity of 1,000 ore tons per day. Fourteen of these mines produce both lead and zinc; seven produce zinc and copper; four produce lead, zinc and copper, and one produces lead only, with silver the main product. Silver and cadmium are important by-products of lead-zinc mining, silver being associated with lead, cadmium with zinc. Gold is recovered in considerable amounts in some copper-zinc mines; antimony, bismuth and indium in certain lead-zinc mines. Sulphur contained in lead-zinc ores is a major product of one company, and four mines produce pyrite as an important by-product. All these mines, with their accompanying mills and smelters employ about 12,000 men.

Canadian smelters refine 75 per cent of domestic production of lead and 60 per cent of domestic production of zinc, the former at a refinery located in Trail, British Columbia, and the latter at the Trail refinery and also at a refinery located at Flin Flon, Manitoba.

Canadian consumers of refined

lead use 40 per cent of mine production, or 52 per cent of refined production. Canadian consumers of refined zinc use only 12 per cent of mine production, or 22 per cent of refined production.

Substantial Resource Base

The Canadian lead and zinc industries are founded on a firm and substantial resource base. Our most recent calculation this year places known Canadian measured and indicated reserves of lead at about 8.7 million tons (gross metal content) equal to about 20 per cent of the known world total and exceeded only by Australia which has 11½ million tons equal to about 26 per cent of the world total. Canada's known measured and indicated reserves of zinc, totaling about 18.6 million tons, are by far the world's largest and are equal to about 25 per cent of the world total. Known potential ore reserves contain an additional 3.5 million tons of lead and 10 million tons of zinc. Exploration of undeveloped areas will undoubtedly add substantially to the total known reserves of both lead and zinc.

Canada is the fifth largest producer of copper, ranking behind the United States, Chile, Northern Rhodesia and the U.S.S.R. We account for about 9.5 per cent of world production while production from the six leading producers accounts for 85 per cent of world mine production. In Canada we refine about 93 per cent of our mine production of copper and we consume, as refined copper, about 40 per cent of our mine production or 44 per cent of our refined production. We operate six copper smelters in Canada and two copper refineries, the latter located at Copper Cliff, Ontario and Montreal East, Quebec. Despite our small population we are the seventh largest copper consuming country.

Copper is recovered in Canada from complex nickel-copper, copper-zinc, and copper-gold ores. In regular operation at present are 23 mines which produce copper, the smallest with a milling capacity of 325 tons per day and the largest with a milling capacity of 28,500 tons per day. Four of

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these mines produce both nickel and copper; seven produce copper and zinc; 4 produce copper, lead and zinc; and 8 produce copper and gold. Cobalt, iron, sulphur, selenium, tellurium, silver, gold, platinum, and platinum metals are important by-products of certain nickel-copper ores. Gold silver, selenium, tellurium and pyrites are important by-products of certain copper-gold ores.

Copper Reserves 8.4 Million Tons

As with lead and zinc, the Canadian copper industry is founded on a firm and substantial resource base. Our calculation this year places known Canadian measured and indicated reserves of copper at 8.4 million tons (gross metal content), contained in producing mines and in potential producers. Indicated and inferred ore in certain other deposits which have been partly explored contain an additional 1.3 million tons of copper. To these primary resources of copper, lead and zinc may be added the large quantities of the secondary metals in which your Association is primarily interested. I still like to think of each ton of No. 1 copper scrap as the equivalent of 100 tons of 1 per cent copper ore in the ground.

All the foregoing is very wonderful; it is unfortunate that there is more to the story. The incentive to continue exploration for lead, zinc and copper — indeed for any mineral — is the knowledge that a major discovery can be brought into production. The incentive to develop a property to production is the knowledge that the resultant product can be sold at a profit. There is some doubt as to whether, in fact, these two incentives exist under present world conditions.

You will recall that we consume in our domestic market only 12 per cent of our mine production of zinc, 40 per cent of our mine production of lead, and 40 per cent of our mine production of copper. We are vitally dependent on the export market for the continued existence and growth of our lead, zinc and copper industries and for the success of major government programs. The Government of Canada, in collaboration with the various provinces, has embarked on substantial "Roads to Resources" and "Northern Development Roads" programs which, in the words of the Prime Minister, the Right Honourable John G. Diefenbaker, are designed to "open up for exploration vast new oil and mineral areas." The usefulness of these programs, in the final analysis, lies in the opportunity to market the resultant product of any mineral discovery.

Bulwarks of Free Enterprise

The Canadian mineral industry is one of the bulwarks of free enterprise in the Free World. In only two areas — gold and coal — does it receive government subsidy and support. There has been full opportunity in Canada for any individual, company or group of companies to search for, discover, develop, mine, and market competitively any mineral. These conditions are essential for a dynamic, expanding industry based on an ample resource potential.

External conditions seem to be changing. Our largest external market is, of course, the United States with which Canada has close geographic, economic, corporate, and defense ties and which is dependent on imports for about 46.7 per cent of its lead, 57 per cent of its zinc, and 17 per cent of its copper requirements. Despite all these facts and despite the encouragement given the Canadian mineral industry during the Korean Emergency, the United States last year reimposed its import tariff on copper and placed import quotas on lead and zinc. Almost daily, the American press contains further references to the possibility of increased tariffs or other restrictive measures on lead, zinc and copper.

Lead, Zinc Import Controls

Controls to limit the importation of lead and zinc into the United States have been in existence for seven months. During this same period, United States smelters have continually urged Canadian mine producers of zinc to ship zinc concentrates at the maximum rate possible so that they could operate their smelters at the most economic rate possible. Thus we have the paradox, on the one hand, of import quotas imposed to protect United States mine producers of lead and zinc while, on the other hand, the United States smelting and refining industry is experiencing production and cost difficulties due to operations at reduced capacity. At the end of April, the first month of the third import quota quarter, 74 per cent of the quarter's Canadian quota for lead concentrates and 62 per cent of the quarter's Canadian quota for zinc concentrates had been filled.

The Canadian government has continually shown a willingness to work with other governments in a study of the problem of the world surplus in lead and zinc maintaining throughout, however, that the current situation is largely the result of past policies of the United States. A Canadian delegation of government and industry representatives has just re-

turned from a United Nations conference on lead and zinc, in New York. During the past month or so, a number of cutbacks affecting world mine production of lead and zinc have been announced. In addition to substantial cutbacks and closures which took place in Canada during 1957 and 1958, the Canadian industry is doing its best, and not, I think, without success, to adjust itself to the restrictions imposed by government action in its most important market.

We have just come through a trying period when the United States government was contemplating the release of substantial quantities of copper from one of its stockpiles. As if the world copper industry had not already had its share of difficulties during the past two weeks!

U. S. Metal Stockpiles

The United States stockpiles have assumed an important place in world metal marketing. These accumulations of ores, concentrates and metals have been made since the end of World War II and they now assume awesome proportions. With the advent of missiles and rockets it would seem that large tonnages of these metals are now superfluous in defense strategy. While it may be ridiculous to suggest that these metals should never be placed on the commercial market, it does not seem ridiculous to express the hope that they will only be released after careful consideration and prior consultation with the world's major producing nations. We recall, all too well, the effect on the world metal market of both United States stockpile accumulation and United Kingdom stockpile disposals. Similar disposals from the United States stockpiles, without planning and consultation, would be most disastrous to both the primary producers and yourselves.

There is, however, some brightness on the horizon. Of major importance is the recognition, seemingly, by copper producers that the greatest danger for copper is a wildly fluctuating price structure. This recognition, accompanied by expanded research and development programs, world population growth, and increases in the standard of living in underdeveloped countries, suggests that the current world surplus of copper is a temporary phenomenon.

Similarly, the relatively recent recognition by lead and zinc producers of the necessity for expanded research and development programs is most heartening. As with copper, world pop-

(Continued on Page 18)

No End in Sight for

Continued Expansion of Aluminum Use

By S. S. INCH, Executive Vice President,
Kaiser Aluminum & Chemical Corp., Oakland, Calif.

LET'S first take a look at what we, in my company, think of the immediate future of the aluminum industry. I might note that whenever this subject has been tackled in the past by a spokesman of the so-called prime producers, the presentation has later been termed "optimistic." Frankly, I have never heard of an executive of an aluminum company standing up anywhere and talking pessimistically. I am certainly no exception to this rule, and I speak to you from the experience of many times having cranked my neck out on the future prospects of the aluminum industry. I have been guilty of understatement every time. I need only go back to 1951-53 when we had finished 8 new potlines at Chalmette, in Louisiana. At the time, one potline's production there looked like all of the aluminum in the world, and I wasn't bashful in saying so. Just three months later I faced the horrible chore of trying to explain what had happened to all of the metal from this presumably bottomless well. Things can change that fast in this business!

Forecast of Use in 1965

You may have heard of our ten-year forecast of aluminum usage which we made in 1955. This forecast of total consumption of aluminum in 1965 shows a requirement for about 8 billion 400 million pounds in the United States—4 million 200 thousand tons. You have also watched the installed capacity figures for U. S. producers and you know from these figures that the installed capacity in 1959-60 is 2 million 600 thousand tons, with 1965 just about five years away. The gap, therefore, in metal supply that is domestically produced is something like 1 million 600 thousand tons to be filled by possible further plant expansions and by secondary metal.

Looking at the present picture of plant capacities in the aluminum industry, now at an operating rate of approximately 80 per cent, you can appreciate the very great likelihood that the secondary industry will be

asked to supply tremendous quantities of aluminum for the 1965 market.

Let's look at just a couple of the principal markets for aluminum which will contribute to this 1965 consumption. The passenger automobile constitutes just one of these industries and even that is only part of what we classify broadly as the transportation market. In 1958 automotive applications required 228 million pounds of aluminum, and it is our estimate that this model-year of 1959 will require 337 million pounds of aluminum. You might be interested in noting at this point that this indicated aluminum usage in automobiles in 1959 exceeds by 10 million pounds the total production of primary aluminum in the United States in 1939.

Automobiles Using More

So far we are talking only about automotive applications already in use. In one popular 1959 car, there are 69 aluminum functional parts and seven trim parts, but when we talk about 1965 we must include a number of additional major applications which we will begin to see in the very near future — I mean the aluminum engine block, the aluminum wheel, hub and brake drum, aluminum radiators and aluminum bumpers.

The advantages of aluminum in the wheel, for instance, are so great — in improved heat dissipation, in the reduction of unsprung weight, in better and safer brakes, and in improved appearance — that conversion could very likely be complete, just as total conversion to aluminum pistons was completed a few years ago. Total conversion in wheels would consume from 360 to 390 million pounds of aluminum every year.

Auto Aluminum Returns as Scrap

Aluminum bumpers would require 240 million pounds, and radiators approximately 74 million pounds. An estimate for the aluminum engine block would range from 200 to 400 million pounds.

The interesting thing about the automotive industry's requirements for aluminum is that this metal will flow in already clearly established channels of trade in which you now play a prominent part. The metal will

come back to you in normal course and there is no reason why this business should not offer increased earning opportunities.

It occurs to me here that it may be well to run through a simple list of the major U. S. markets for aluminum, indicating present consumption and forecasting probable usage in 1965. The mere naming of these industries even in this very broad classification will at once, I am sure, suggest to you the channels through which this metal will become available to the smelters. You will also no doubt have a pretty good idea of the time factor involved in the re-cycling of this metal in each of these industries.

The building industry is the largest present consumer of aluminum, accounting for 757 million pounds in 1958. Our forecast for this great market which includes all types of building, architectural and structural applications, is about one and one-half billion pounds by 1965. In this field we expect a large early increase to take place in residential building — one which could account for a rise from the present approximately 50 pounds of aluminum per house to as much as 3 thousand pounds. The specific applications due for this growth are well known, including siding, roofing, doors, windows, screening, insulation, heating, ventilating and air conditioning equipment, electrical wiring, light fixtures, and a host of other applications.

Electrical Second User

The electrical industry is already the second largest user of aluminum taking 468 million pounds in 1958 and expected to take over 1 billion pounds in 1965. The largest single application in this field is in aluminum electrical conductor, both transmission and distribution lines, accounting for a current usage of approximately 230 million pounds per year. This one application is estimated to take 500 million pounds per year by 1965. I am not going to try to go into all of the reasons why we believe each of these large increases will take place, but I can point out here very briefly the reason why aluminum conductor will merit this great

Text of address delivered April 8, 1959, before 46th annual convention of the National Association of Waste Material Dealers in Chicago.

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Indium	Zinc Sulfate
Lead	

AMERICAN SMELTING AND REFINING COMPANY
120 BROADWAY, NEW YORK

**ADOLPH LEWISOHN
SELLING CORPORATION**

61 Broadway, New York

Successor to

Adolph Lewisohn & Sons, Inc.

COPPER

MOLYBDENITE
AND MOLYBDIC OXIDE

Sales Agent for
MIAMI COPPER CO.
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growth. The answer is very simple: 1 pound of aluminum is equal electrically to 2 pounds of copper.

The third largest market in our classification is the transportation industry. Under this one very broad title we include rail, marine, highway transport, aircraft and the passenger automobile. Usage in all of these categories is expected to rise to over 1 billion pounds by 1965. It is possible, however, that the passenger automobile, or as we call it, the automotive market, may alone account for this tonnage. We have already gone into this field in some detail, so we will proceed to some of the other markets.

The broad field known as consumer durables, primarily appliances, took 349 million pounds in 1958 and we forecast an annual usage of over 800 million pounds by 1965.

Containers and Packaging

Containers and packaging is another rapidly growing market for aluminum, using 227 million pounds in 1958. The forecast for 1965 is over 400 million pounds. This category, of course, includes a variety of aluminum products ranging from light gauge aluminum foil through semi-rigid aluminum food containers, and at the other end of the range, aluminum cans of all sizes and shapes. Here, obviously, we approach a very short-term materials cycling.

Machinery and equipment is another broad industrial classification which provided a market for somewhat less than 200 million pounds of aluminum in 1958, and is expected to about double by 1965.

Then we have a very large general category called all other uses amounting to over 600 million pounds in 1958 and forecast for one and one-half billion pounds in 1965. This large general classification is a testimonial to the number and variety of aluminum markets and applications literally representing a cross-section of the metal-working industries. This portion of aluminum usage will, of course, come back to you through many channels of trade.

Defense Applications

We have one other classification which we separate from commercial business for statistical reasons. That is the defense classification. Defense applications took over 400 million pounds in 1958. Our forecast for 1965, which of course is anyone's guess depending on his estimate of the international situation that far ahead, is 500 million pounds.

All together, therefore, we expect a rise, in terms of recent annual markets of about 4 billion pounds, reaching a total aluminum consumption of

over 8 billion pounds by 1965. We are, I might say, not alone in such estimates. Our forecast of total industry shipments has been corroborated by published estimates of total aluminum consumption made by other informed sources.

Potential in Can Manufacture

The potential for aluminum in can manufacture that would represent a total conversion in the canning of selected products is something over 1 billion pounds. To arrive at this actual consumption would, of course, require a good deal of further product and market testing, some new manufacturing processes, and design and incorporation of special container features. Naturally, we expect all of these things to happen and we are already devoting a good deal of research and development effort and expense to see that these stages are accomplished. As you may know, we have operated for several years an experimental can manufacturing facility in the Chicago area and we expect to continue this work in the development of manufacturing techniques of value to the can manufacturing industry.

Two Major Can Categories

For purposes of our discussion, aluminum can consumption may be divided into two major categories from the point of view of where the canned produce is used and the can discarded. The two markets which immediately stand out on this basis are the "captive" market, indicating situations where contents of the can are used or consumed at central locations; and the "non-captive" market where contents of cans are consumed in scattered locations, typically the average home. The implications for scrap collection are obvious.

The oil can is perhaps the classic example of the "captive" can market. Over a billion cans of oil are consumed annually, almost entirely at central service station locations. Even if service stations have their used aluminum cans picked up free of charge, whereas they have to pay to haul away tin-plated oil cans, there would be an economic advantage to the operator sufficient to be an incentive to accumulate the empty aluminum cans. One billion oil cans, if fully converted to aluminum, would provide 100 million pounds of scrap aluminum. Discounting the possibility of economic collection of this total amount, we could reasonably expect a 50 per cent collection recovery which will amount to some 50 million pounds of scrap aluminum.

A second large so-called "captive" market can be expected to develop in

the use of the large No. 10 ($\frac{3}{4}$ gallon) and No. 12 (1 gallon) cans by canning companies in the shipment of concentrates such as tomato paste and pineapple from one plant location to another to be reconstituted with other products. Empty tin cans now used have no value except for a very small percentage which are reclaimed for use by florists. There are no exact figures for the potential here; however, this "captive" market is apparently large enough and sufficiently concentrated to justify a collection program whenever this market is converted to aluminum.

Other "Captive" Markets

Other "captive" markets include the restaurant and institutional users of aluminum cans in metropolitan areas where tonnages could justify a program. A further "captive" market will, of course, exist at can manufacturing plants which will generate relatively large amounts of scrap.

There is for instance a 22 per cent scrap generation in the production of can ends. Can bodies, however, will not yield much scrap.

Now, in connection with the future of aluminum in cans, there is one key point here that makes me happy I am talking to this group today. Essentially, one of the major differences between an aluminum can and a tin can is that with aluminum there remains a waste material that has a far greater intrinsic value. The obvious catch to this is the need for an economical system by which this material can be collected, processed and brought back into the market.

You have undoubtedly read of or heard of numerous ideas from the aluminum industry of just how this process is going to work — in theory, that is. However, as for actual practice, the real experts on this process are here. May I, therefore, pose as a challenge to your industry today the working out of an efficient system that will result in the re-cycling of this material into useful channels? I might even be so bold as to suggest future meetings of a joint committee from the aluminum industry and from your industry to discuss the various aspects of the efficient return of this material for reuse. Such an effort will be a definite assistance in moving aluminum into the rigid container market, and in certain future applications will make the difference between a successful application of aluminum and one that is marginal. I can assure you of the importance to the aluminum industry of your best ef-

(Continued on Page 18)

POSSIBILITY OF A U. S. COPPER INDUSTRY STRIKE REMAINS A DOMINANT FACTOR IN THE U. K. MARKET

New Talks on Stabilizing Red Metal Price; British Gov't to Sell Tin Via Buffer Stock Manager; Cable Industry Lead Use Off; Zinc Improves

June 6, 1959

AS WAS EXPECTED, the meeting of the International Wrought Non-Ferrous Metals Council in London on May 5 was a focal point for revived attempts, particularly on the part of the African producers, to secure some agreement with European consumers on an alternative method of pricing copper from the existing one of using the London Metal Exchange quotations as a basis for period contracts.

The Wrought Non-Ferrous Metals Council as such, takes no part in these negotiations but it provides a useful meeting place for consumers and producers. Prior to the meeting, individual producers put fresh proposals to the various customers in the U. K. and on the Continent, based on the idea of a dual price system. This evolved from the reasoning that it was impracticable to expect custom smelter supplies to be sold at pegged prices so that it was proposed that these should be left free to move as they wished while primary producers would, by agreement, move their quo-

By L. H. TARRING
London, England

tations infrequently and try and achieve as much stability as possible

It was claimed that this would leave the London Metal Exchange free to operate as a hedging medium although whether it would be able to fulfill this function satisfactorily if its quotations were no longer used as a pricing basis for products, is, perhaps, debatable. Full details of the producers' scheme have not been made public nor have the reactions of the consumers but it is understood that the proposals made met with a fair amount of approval in some—but not all—Continental countries but in their present form were unacceptable to British consumers.

The U. K. fabricators have unhappy memories of the price fixing attempt of the Rhodesian Selection Trust some time ago under which there were often wide disparities between the Rhodesian Selection Trust price and the open market quotation. While it is quite obvious that these problems would be very much smaller if all the main supplies were in agreement, the fact remains that U. K. consumers remain somewhat reluctant to agree to a dual price system.

This is probably not the only reason why they rejected the latest proposals of the producers as there were other problems concerned with limits of the amount of metal they would be allowed to specify on any given day under period contracts. Although for the moment, the two sides seem to be quite a long way apart, it looks as if the subject is by no means closed and more is likely to be heard about it from time to time as both producers and consumers still yearn for a more stable copper price.

On this subject, the chairman of the big British Insulated Callender's Cables Group said in his annual statement that there had never been a clearer realization of the difficulty and a greater desire to try to reach an equitable solution. It was also in-

teresting to note that in an after dinner speech to the Northern Rhodesian branch of the Institution of Mining and Metallurgy Sir Ronald Prain, chairman of the Rhodesian Selection Trust Group, said with regard to the severe drop in copper prices to £160 some time ago, that if this situation occurred again, one would find a very different set of conditions because the copper price would be maintained, if possible, by the world's producers.

Sir Ronald also threw a good deal of blame for unstable copper prices on the U. S. Anti-Trust Laws since they prevented American copper producers entering into agreements with under-developed countries to stabilize the copper price, thus nullifying the effect of the very large sums that America was pouring into those countries.

American Strike

From the market point of view, the possibility of a major strike in America remains a dominant factor. Anticipatory buying in America has not proved quite as aggressive as it was at one time thought possible but nevertheless it has undoubtedly helped to give the market a good tone on balance. Day-to-day con-

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. production of refined copper in March was 7,727 tons of primary and 7,990 tons of secondary compared with 8,224 tons and 7,780 tons respectively in February. Stocks rose during the month to 62,200 tons of refined and 10,746 tons of blister (56,100 tons and 9,775 tons respectively as at the end of February). Of the refined stock consumers held 35,296 tons (34,068 tons). Full consumption details are given below:

Unalloyed Copper	Mar.	—31st Mar.—
Products	1959	1958 1959
Wire (1)	16,320	64,696 54,599
Rods, bars & sections	1,712	5,321 4,943
Sheet, strip & plate	4,254	14,695 13,361
Tubes	4,928	14,835 14,962
Castings & miscellaneous	650	1,950 1,950
Allied Copper Products		
Wire	1,353	4,155 4,187
Rods, bars & sections	10,768	31,731 31,776
Sheet, strip & plate	7,954	23,549 24,010
Tubes	1,704	5,989 5,180
Castings & miscellaneous	5,926	19,230 17,947
Copper sulphate	3,167	7,948 9,963
Total all products	58,736	194,099 182,878

Copper content of output 47,431 161,091 148,703 Consumption of refined copper (2) 36,124 125,883 111,714 Consumption of copper & alloy scrap (3) (copper content) 11,307 35,208 36,989

Notes: (1) Consumption of H. C. copper and continuous copper wire rods for wire and production of wire rods for export.

(2) Virgin and secondary refined copper.

(3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. TIN STATISTICS

Consumption of tin during March was 1,773 tons compared with 1,614 tons the previous month, according to the British Bureau of Non-Ferrous Metal Statistics. Production dropped to 1,575 tons (plus 30 tons of secondary) against the February figure of 1,677 tons (36 tons), while stocks in the U. K. at March 31st showed a decline of 13,214 tons from the February total of 14,715 tons. Details of consumption of primary tin are given below:

	Mar.	—31st Mar.—
Tinplate	892	2,191 2,443
Tinning:		
Copper wire	40	148 142
Steel wire	8	23 25
Other	67	186 196
Total	115	357 363
Solder	182	443 569
Alloys:		
Whitemetal	240	704 750
Bronze & gunmetal	173	618 597
Other	32	109 96
Total	445	1,431 1,353
Wrought tin (1)		
Foil & sheets	25	75 73
Collapsible tubes	15	71 57
Pipes, wire & capsules	2	14 7
Total	42	160 187
Chemicals (2)		
	263	291
Other uses (3)		
	21	291
Total all trades	1,773	4,866 5,156

Notes: (1) Includes Compo and 'B' Metal.
(2) Mainly Tin Oxide. (3) Mainly powder.

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER				TIN				LEAD				ZINC			
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Cash	3 Months	Settlement	Current Month	3rd Following	£ s. d.	£ s. d.	£ s. d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1954 Averages	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11	90 13 4	89 12 3	97 14 3	95 3 7	96 11 7	80 1 1
1955 Averages	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	90 13 4	89 12 3	116 6 5	114 8 9	97 14 3	95 3 7	96 11 7	80 1 1
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7	116 6 5	114 8 9	97 14 3	95 3 7	116 6 5	114 8 9
1957 Averages	219 8 10	221 0 3	219 12 10	754 15 4	747 10 10	755 8 11	96 12 9	96 12 9	81 11 7	80 1 1	81 11 7	80 1 1	81 11 7	80 1 1	81 11 7	80 1 1
January	171 7 5	174 0 5	171 10 11	730 15 5	725 0 3	731 0 5	72 3 4	72 10 11	62 11 4	62 3 7	62 11 4	62 3 7	62 11 4	62 3 7	62 11 4	62 3 7
February	162 17 9	161 2 11	163 0 9	731 11 0	732 2 9	731 17 6	74 3 7	74 0 6	63 17 2	63 10 11	63 17 2	63 10 11	63 17 2	63 10 11	63 17 2	63 10 11
March	170 2 9	171 4 5	170 5 11	731 5 9	735 13 1	731 12 5	74 15 9	74 11 3	61 9 9	63 11 2	61 9 9	63 11 2	61 9 9	63 11 2	61 9 9	63 11 2
April	175 12 0	176 18 6	175 15 0	731 0 3	729 18 6	731 7 6	72 17 5	73 0 4	62 7 6	62 11 6	62 7 6	62 11 6	62 7 6	62 11 6	62 7 6	62 11 6
May	178 15 11	180 15 1	178 19 1	780 15 11	733 19 6	731 1 5	72 2 9	72 9 6	61 17 1	62 5 3	61 17 1	62 5 3	61 17 1	62 5 3	61 17 1	62 5 3
June	194 12 3	196 3 8	194 15 6	730 5 6	732 16 8	730 10 6	73 5 6	74 3 1	64 3 6	64 13 0	64 3 6	64 13 0	64 3 6	64 13 0	64 3 6	64 13 0
July	199 16 4	200 11 8	199 19 9	781 4 6	733 4 2	731 9 7	71 9 8	72 19 2	63 11 11	64 5 6	63 11 11	64 5 6	63 11 11	64 5 6	63 11 11	64 5 6
August	205 16 3	206 1 2	205 19 6	730 9 0	731 11 0	730 15 0	70 7 8	71 17 1	63 16 8	64 11 4	63 16 8	64 11 4	63 16 8	64 11 4	63 16 8	64 11 4
September	209 6 3	209 8 6	205 9 1	718 2 11	715 17 1	718 19 1	70 10 5	71 17 1	65 0 8	65 7 9	65 0 8	65 7 9	65 0 8	65 7 9	65 0 8	65 7 9
October	236 5 9	229 15 5	236 13 1	740 16 9	725 11 6	741 8 3	74 1 0	74 11 6	70 9 4	69 9 10	70 9 4	69 9 10	70 9 4	69 9 10	70 9 4	69 9 10
November	242 19 6	236 11 9	243 4 3	757 12 6	759 3 9	758 0 6	75 11 8	75 16 9	75 5 6	72 16 1	75 5 6	72 16 1	75 5 6	72 16 1	75 5 6	72 16 1
December	220 19 11	220 14 8	221 2 10	756 9 1	758 1 2	756 16 2	72 4 1	72 6 7	74 6 10	71 5 1	74 6 10	71 5 1	74 6 10	71 5 1	74 6 10	71 5 1
1958 Averages	197 13 3	197 9 3	197 16 11	734 18 6	734 17 11	735 6 1	72 15 8	73 6 10	65 17 12	65 10 12	65 17 12	65 10 12	65 17 12	65 10 12	65 17 12	65 10 12
1959																
January	230 2 0	227 5 10	230 5 0	758 15 6	759 4 9	759 2 10	71 17 0	72 3 3	74 17 8	72 18 8	74 17 8	72 18 8	74 17 8	72 18 8	74 17 8	72 18 8
February	236 4 2	235 10 8	236 7 6	772 9 9	773 0 9	772 15 0	69 19 4	70 16 6	73 13 8	71 19 8	73 13 8	71 19 8	73 13 8	71 19 8	73 13 8	71 19 8
March	248 10 3	247 12 2	248 13 6	779 14 9	783 5 9	780 1 6	69 10 3	71 4 2	75 2 5	73 18 8	75 2 5	73 18 8	75 2 5	73 18 8	75 2 5	73 18 8
April	240 0 5	240 6 6	240 3 5	782 5 3	783 15 5	782 11 4	69 1 0	70 8 4	72 13 9	72 9 2	72 13 9	72 9 2	72 13 9	72 9 2	72 13 9	72 9 2
May	236 4 2	236 11 6	236 6 9	784 4 8	784 10 9	784 10 0	70 16 0	71 13 10	77 7 1	75 17 6	75 17 6	75 17 6	75 17 6	75 17 6	75 17 6	75 17 6

sumer buying in Europe has been on a very small scale lately.

Commercial sentiment here, generally speaking, has definitely undergone an improvement in recent weeks and a brighter outlook also seems to be emerging on the Continent. For the present, however, period contracts seem to provide pretty well all the copper that consumers need.

The Board of Trade here has announced that in continuance of the Government's program of disposing of stockpile metal, 6,000 tons of various shapes will be offered for sale by tender for delivery during July-November. Additionally, the Government has about 2,200 tons of copper cakes available for sale by negotiation. This announcement was not unexpected and had little discernible effect on the market.

A much bigger scare, of course, was the recent threat that substantial quantities might be released from the United States DPA inventories and the whole question of the release of these big U. S. Government hold-

ings continues to cause a certain amount of apprehension here in view of the obvious desire on the part of some sections of the U. S. Administration and Legislature to get rid of this incubus.

ITC May Meeting

Interest in tin during the past month naturally centered around the meeting of the International Tin Council in Copenhagen towards the end of May. The decision at that meeting to increase third quarter export quotas by 2,000 tons to 25,000 tons was in accordance with expectations and, indeed no great surprise would have been felt had slightly larger quotas been authorized.

It is obvious, however, that after the difficult road it has so far traveled, the International Tin Council is determined as far as possible to keep fairly tight control over the tin situation. Since the meeting, prices have hardened a little and might be allowed to rise a bit further, though no major advance is anticipated.

Consumer demand, generally, keeps up fairly well but, of course, the American situation is overshadowed, at the moment, by the threatened steel strike and its possible effect on the tinplate industry.

A particularly interesting feature of the International Tin Council's meeting was the announcement of agreement, in principle, for 2,500 tons of the British Government's stockpile tin to be released through the Buffer Stock Manager. The interest is more in the precedent that this establishes than in the fact that it will ensure that this moderate quantity will be released in accordance with the general Buffer Stock policy. Obviously it is hoped that if at some future time American Government nonstrategic stockpiles were to become available for marketing they

would also be sold through the Buffer Stock.

It is now believed that the United Nations meeting to consider the renewal of the present Agreement (which does not expire until the end of June 1961) will be held in May 1960.

Lead Curtailments

Although it is generally conceded that much more progress was made at, or in connection with, the United Nations conference on lead and zinc in N. Y. at the end of April than had been anticipated, the voluntary cuts in supplies announced by a number of leading producers in different countries still left the prospective statistical situation in the latter part of this year rather over-weighted on the production side.

As a Canadian Government spokesman subsequently pointed out, nothing was done to deal with the al-

(Continued on Page 18)

U. K. ZINC STATISTICS

U. K. zinc stocks rose from 36,850 tons at the end of February to 38,457 tons at the end of March according to the British Bureau of Non-Ferrous Metal Statistics. Of the March total consumers held 17,761 tons. Production during March was 7,012 tons, an increase over the February total of 5,642 tons. Consumption details are given below:

	3 mos. ending Mar.	—31st Mar.
Brass	8,356	25,208
Galvanizing	8,129	21,795
of which: General	2,523	8,218
Sheet	2,233	4,780
Wire	1,686	5,499
Tube	1,687	3,298
Rolled zinc	1,884	6,085
Zinc oxide	2,535	7,501
Zinc diecasting and forming alloy	4,436	13,127
Zinc dust	1,025	2,660
Miscellaneous uses	878	2,846
Total all trades	27,243	79,222
of which:		80,408
Slab zinc		
High purity (99.99%)	4,673	14,618
Electrolytic & high grade (99.95%)	5,175	15,635
G.O.B. Prime Western & debased	10,273	27,887
Other virgin material	227	850
Remelted zinc	457	1,239
Scrap—(Zinc content:		
Zinc metal, alloys & residues	2,879	8,065
Brass & other copper alloys	3,559	8,262

METALS, JUNE, 1959

POSSIBILITY OF STRIKES HAUNTS METAL INDUSTRY OPERATIONS AS CONTRACT EXPIRATION DATE NEARS

Custom Smelters Cut Copper Price 0.50c to 31.50c Level Quoted by Producers; Spot Tin Tight; Lead, Zinc Firm; Silver, Platinum Steady; Quicksilver Weak

June 15, 1959

THE spectre of strikes is haunting metal industry operations as the midyear contract expiration date approaches. Prospects for copper, lead and zinc in the months ahead are closely linked with the question of labor peace. If there are no work stoppages industry factors will learn how much of the recent general business improvement was due to inventory accumulations as a strike wedge. Prolonged strikes would, of course, throw a monkey wrench into the entire economy.

Pricewise the major domestic metal markets were relatively stable last month. The large primary copper producers adhered to pricing their metal at 31.50c a pound delivered, date of shipments, although custom smelters reduced their quotations by 0.50c to 31.50c. Lead was unchanged at 12.00c New York and zinc was firm at 11.00c East St. Louis for the Prime Western grade. Tin prices moved higher, particularly for the nearby positions. Platinum and silver were steady but quicksilver weakened.

Copper Market Quiet

The large primary copper producers have opened their order books for July but not many customers have been rushing to place orders. Regular customers are expected to take as much as they normally do but with many fabricating plants closed for two weeks in July because of summer vacations, the July purchases are usually smaller than for other months.

Most fabricators are comfortably fixed with respect to their copper inventory. They feel reasonably certain that they will get all the copper that they contracted for and that is to be shipped this month since producers are likely to make every effort to move as much copper out of the refineries as possible prior to June 30. On the basis of their fabricating operations during the past few months, when the end-users of fabricated products also insisted on immediate shipments, the refined copper stocks in the hands of brass and wire mills are not excessive. However, on the basis

of their normal rate of operations, they are believed to have a reserve that may be close to 20 per cent above normal.

Influenced by the weakness in London and the continued downtrend on the Commodity Exchange, custom smelters reduced their scrap copper buying prices and on June 15 quoted No. 2 heavy copper and wire at 25.00c a pound.

Labor Negotiations

Labor negotiations, both here and in Chile, appeared to be getting along fine—until the International Union of Mine, Mill and Smelter Workers warned that "time is running out" in contract negotiations with the domestic copper companies. The domestic pacts expire June 30.

But Anaconda has reached an agreement with its workers at its Chuquicamata mine in Chile. A new 15-month pact becomes effective July 1. The Chilean property produces about 14,000 tons of electro copper a month and approximately 7,600 tons of blister a month. Anaconda's Africana mine, at this writing, is still on strike.

The contract between Braden Copper, a Kennecott subsidiary in Chile, and the union does not expire until October 1, 1959. In some quarters the opinion was expressed that the agreement at Chuquicamata may set the pattern for the other Chilean mines.

The Mine, Mill and Smelter Workers union issued a statement on June 11 which said in part: "We consider the next two weeks to be of decisive importance in determining whether or not the mining corporations are going to make a serious effort to negotiate a 1959 agreement across the bargaining table."

"Time is running out. Beginning the week of June 15 meetings are scheduled with every major company in the industry. The time for so-called 'exploration' is at an end."

The union said it was calling a meeting of its national wage policy committee, consisting of all major bargaining councils, on June 22 to assess the developments in negotiations up to that date and "to take whatever action is necessary to achieve satisfactory settlements in 1959."

Lead Sales Taper Off

Consuming demand for lead has lightened with sales tapering off. Market observers pointed out however, that in view of the heavy recent purchases lessened buying activity was to be expected. If the consumers are well covered on their nearby needs, by the same token producers are well sold ahead, so that a quiet spell is not causing concern at this time. Carload sales were being consummated at 12.00c New York and 11.80c St. Louis, for July and July shipment.

Lead, Zinc Duty Bill

A bill providing "peril points" for lead and zinc tariffs has been introduced in the Senate by Sen. James E. Murray (Dem., Mont.), on behalf of himself, Sen. Mike Mansfield (Dem., Mont.) and other senators.

Under the Murray proposal, a basic tariff rate of 4.00c a pound would be imposed on lead and zinc if the price of the former is below 15.50c and the latter below 13.50c.

Zinc Sales Satisfactory

Zinc producers have built up a good backlog of business on their books and are satisfied with the orders being booked daily. At the rate at which metal is being shipped to consumers, the shipments for June should make a good showing.

A tight supply situation is developing in Special High Grade and some non-integrated makers of die casting alloys are finding it difficult to get tonnages they have been willing to purchase. Prime Western sales were being made for June and July shipment at 11.00c a pound, East St. Louis.

If the threat of a steel strike were not overhanging the market, the price of Prime Western zinc probably would have moved up. Because of the strike uncertainty, the feeling appears to be quite general that the price should remain unchanged.

May Zinc Shipments

The improvement that has taken place in zinc is shown by the statistics for May. Shipments of all grades of slab zinc to domestic consumers in that month amounted to 85,073 tons, as compared with 78,358 tons in April. May shipments were the largest for any month since October, 1958. Total

stocks of all grades of zinc at the end of May were down to 196,004 tons as against 203,863 tons at the end of April. Production of all grades of zinc in May showed a slight gain to 77,489 tons from 76,393 tons in April.

Tin Export Quotas

The International Tin Council at its Copenhagen, Denmark, meeting in late May, announced that tin export quotas for the six producing members will be increased to 25,000 long tons for the three months starting July 1. This is an increase of 2,000 tons over the 23,000 tons of permissible exports for the current three months and 5,000 tons above the 20,000-ton quota for the first three months of 1959.

It also was disclosed that the ITC's Buffer Pool Manager will dispose of 2,500 tons of tin from the British Government's stocks of tin to be spread over an unspecified period.

The ITC also extended the Buffer Pool Manager's authority to sell from its stocks if deemed desirable within the middle price range in the agreement, £780 or £830 a long ton.

The export quota action taken by the ITC had been pretty well discounted. The increase in the exportable quota by 2,000 tons is regarded as so small as to have little effect on the world supply situation and hence is likely to have little influence on the price of the metal. The decision to liquidate the U. K. Government's stocks is regarded as constructive and one that should be helpful to the market.

Spot Price Nominal

From June 2 until the date of this report the spot price for Straits tin in the New York market has been nominal. The price for prompt tin also had been nominal until June 11, when it was again offered at a firm price. Straits tin prices for the nearby positions, during the period in review, advanced. One important plater is credited with having bought up virtually all the Straits tin that was available for first half June delivery with the result that importers were sitting on spot metal and refusing to sell it in order that they be able to fulfill their first-half June contracts.

Spot Straits tin on June 11 was quoted at 104.50c a pound, nominal, at New York, as against the last price in this space of 103.12½c for May 14. The high of 104.75c, nominal, for the period May 14-June 11 was recorded on June 8. The low for the same period was the 103.12½c for May 14.

Boost Aluminum Output

The improved outlook for sales of products and a general improvement

in economic conditions in the aluminum industry has brought with it additional announcements by primary producers that they are increasing their aluminum production. Aluminum Co. of America, Kaiser Aluminum & Chemical and Reynolds Metals Co. have been increasing output right along. Reynolds on June 8 finally announced it was boosting its primary aluminum output to 100 per cent of rated annual capacity—601,000 tons. A few days later Anaconda Aluminum Co. Reduction Plant at Columbia Falls, Mont., said it would reactivate about 30 pots around July 15, to bring the production level to 88 per cent of capacity or at an annual rate of 57,000 tons.

Alcoa, Kaiser and Reynolds also announced that effective July 1, 1959, aluminum products which previously sold on an "f.o.b. shipping point full freight allowance" basis will be sold on "f.o.b. destination or customer custody" terms. Kaiser, which initiated the action in shipping terms, said the new basis will provide fair and equitable pricing consideration to all customers and eliminate many abuses.

Platinum Steady

Platinum was steady during the month in review. Refiners held to their range of \$77 to \$80 per ounce. With dealers not willing to do business under \$75 an ounce, the market ranged from \$75 to \$80 an ounce.

Silver Unchanged

The New York silver price was maintained at 91.37½c an ounce, which level was established on March 4 as the result of an increase of 0.25c an ounce.

Quicksilver Weaker

Spot quicksilver at this writing was available at \$241 to \$243 per flask of 76 pounds, as against the last range in this space of \$245 to \$249 per flask. Lack of domestic consuming demand, plus some easing in the spot supply situation, were the chief factors contributing to the weakness.

Germanium Prices Cut

Eagle-Picher Company has reduced prices for some grades of germanium by 1.70c per gram. First reduction metal in 1,000-gram lots is now 33.30c per gram, and 31.30c in 10,000-gram lots. Intrinsic metal is now 35.30c per gram in 1,000-gram lots, and 33.30c in 10,000-gram lots.

Prices for the company's new ultra high purity gallium, 99.9999% grade, are unchanged at \$3.75 per gram for lots of 1 to 99 grams; \$3.50 for lots of 100 to 999 grams, and \$3.25 for lots of 10,000 grams and over.

Washington Report

(Continued from Page 5)
if the price of the former is below 15.50c and the latter below 13.50c.

It had previously been reported that Senator Murray intended to offer an amendment providing for tariffs of 3.00c a pound on both metals as an amendment to a House bill (H.R. 7523) providing for a one-year extension beyond June 30, 1959, of the existing corporate normal tax rates and of certain excise taxes.

However Senator Murray has boosted the proposed tariff rate to 4.00c on each metal and offered a separate bill rather than a "rider" to the tax bill.

Because of the power of the Western bloc in the Senate, such legislation might have a chance there. However, the House has been less friendly to minerals proposals, either for tariff protection or for subsidies. The new Western scheme can be expected to draw Administration opposition, particularly from the State Department. Latin American lead and zinc producing nations complained last year when President Eisenhower put quotas into effect.

Mineral Resources Boosted

Another form of aid exploration assistance for strategic and critical minerals by the former Defense Minerals Exploration Administration added approximately \$585,000,000 to the value of the nation's mineral resources. Assistant Secretary of the Interior Royce Hardy said during the month.

The new Office of Minerals Exploration, which succeeded the Defense Minerals Exploration Administration on September 11, 1958, is continuing a similar type of program.

The OME has received 44 applications for assistance under the new program through April 30. These applications relate to 20 mineral commodities ranging from antimony through zinc, and propose work in 16 states.

Execution of a contract by OME was also announced by Mr. Hardy.

This contract provides for mica exploration in Mitchell County, North Carolina, by George D. Dorroh and M. M. McCormick. Total estimated cost is \$8,464 with Government participation set at \$3,232.

OME regulations, application forms, and instructions for filing may be obtained from the OME, Department of the Interior, Washington 25, D. C.

Daily Metal Quotations for May, 1959

**The following quotations are taken from the Daily Metal Reporter®
(In Cents Per Pound)**

Other spot quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.

British Metal Review

(Continued from Page 14)

ready existing stocks. As a result, although there was a good deal of satisfaction at the progress that had been made, there was not sufficient inducement to bring about any solid recovery in prices.

Just recently, the position in the United States seems to have improved quite a bit, assuming that the increased rate of buying there is not merely a precautionary measure against the possibility of some production stoppages in connection with the impending wage negotiations.

In Europe, however, although general economic sentiment is now beginning to be more hopeful than for some little time, the actual level of lead consumption has not so far shown any noticeable improvement and the difficult conditions in the cable industry are not helpful to lead consumption. Indeed, it will be noted that in the U. K. in the first quarter of this year, consumption by the cable trade was down as much as 10,000 tons compared with the corresponding period of 1958.

Cut in Zinc Surplus

The further curtailment of mine output and/or exports of concentrates and zinc metal announced about the time that the United Nations conference was being held in New York will, it is hoped, reduce the surplus of supplies over demand in the case of zinc to a negligible figure by the end of the year. As a result prices on the market here showed some further improvement, at one time practically touching £80 a ton.

Although quotations have slipped back a little from the top there is no doubt that the zinc outlook is regarded more hopefully now than for some time and the supply position here is no more than adequate. Indeed, unless a reasonable amount of metal is sent to the U. K. from the Continent in the coming months, it looks as if there could easily be some stringency in supplies.

The high level of motor car trade activity and brisker business in consumer durable goods keep up a pretty high level of demand for zinc alloy diecastings and the galvanized sheet trade has shown some small improvement. So far, the brass industry as a whole has been operating at below peak capacity although with general sentiment now more cheerful than it has been for some time, it is hoped that the later months of this year will see some expansion in this direction also.

Aluminum Use to Rise

(Continued from Page 12)

orts and assistance on this problem.

One more thought I would like to leave you with in conclusion — I have had copies made of a large chart we have in Oakland that we have been using during the recent cold months to keep us slightly warm. It is entitled, "Total Domestic Aluminum Consumption." I have extended out past 1958 some dotted lines. I believe the basic importance of these figures is that if the cyclical recovery which is now indicated in progress for 1958, continues at a rate of growth comparable to the past recovery from low cycles, then just take a look at where this leads us in the future!

Using the classic basic proportion of re-cycled metal to prime metal — and we see no fundamental reason why this should change materially in the long run — then these figures would indicate that in 1965 your industry would be handling one billion, 800 million pounds of aluminum per year in your day-to-day business.

There are two questions that jump to mind — first, who of you here today will increase his share of this business as time passes? Secondly, and probably more important, just who will make the greatest effort from a development standpoint to help promote this growth? I have felt and have often said that the job of selling aluminum is 25 per cent direct sales effort and 75 per cent product development. This is essentially why the aluminum business has been a pleasant one in which to work. Things change from day-to-day — new uses and new applications appear from nowhere to very pleasantly upset our previous calculations.

The interesting key to this new application problem in aluminum is that one time out of a hundred it is the result of a long technical process usually worked out by one of the so-called prime producers. Ninety-nine times out of a hundred it is some rugged individualist who sees an opportunity — who doesn't know that the product of his dreams can't be made or can't be sold, and he, therefore, goes and does it. This is what might be termed the romance of the aluminum industry.

This grass roots product development will come in the future, as it has in the past, from every corner of the compass and it will no doubt always bring forth the same natural reaction from we startled "experts" — "Why didn't I think of that!"

Many times, or probably most times — these dreamers and these developers will come in contact with your industry even before they come to us. I can only ask that you exert your utmost efforts in helping along the 75 per cent portion of this aluminum development sales effort that is the most fun — and also the most rewarding.

One thing is for sure—the greater the combined effort of your industry and ours in furthering the use of aluminum, the faster and larger we will both grow.

Metals in Canada

(Continued from Page 9)

ulation growth and increases in the standard of living in underdeveloped countries, are more likely to bring about shortages rather than surpluses in the long run.

Increase in Lead Consumption

In the past 10 years alone, world lead consumption has increased by about 43 per cent, zinc by about 53 per cent and copper by about 45 per cent. During this same ten year period, the average annual increase in world consumption has been 4.0 per cent for lead, 5.0 per cent for zinc and 5.2 per cent for copper. These are most encouraging figures to look back on, from the viewpoint of both the producer of primary metal and the dealer in secondary metal. Increased consumption of primary metal brings about increased generation of scrap which, in turn, brings about increased business for you, gentlemen. In the past, you have always shared in the increase in world demand for metals. I see no reason why this should not continue in the future.

Up to this point I have limited my remarks solely to lead, zinc and copper. However, I am well aware that you are concerned with many other metals and alloys. As varied and complicated as your business has been in the past, I feel that it will become increasingly more varied and complicated in the future. For instance, the rare or less-common metals are becoming more commonplace as a result of improved technology and resultant increased consumption. Canadian secondary material dealers will have increased opportunities to grasp in these fields. The successful dealers will be those who keep abreast of advances in technology, and of the new areas of use and resultant scrap generation of these metals.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

	Crude Production		(In tons of 2,000 pounds)			Stock Increases or Decreases		
	Primary	Secondary	Refined Production	Deliveries to Customers	Refined Stock End of Period	Blister	Refined	Total
1957								
Total	2,897,719	123,270	3,035,588	2,853,307	458,340	-14,599	+103,920	+89,321
1958								
May	218,387	11,190	225,771	212,993	498,516	+ 3,806	- 2,650	+ 1,156
June	214,283	11,414	228,387	240,825	476,823	- 2,540	-21,963	-24,233
July	216,315	9,516	229,578	220,801	475,164	- 3,747	- 1,659	- 5,406
August	224,673	9,474	217,914	247,116	436,476	+16,233	-38,688	-22,455
September	202,719	7,960	204,006	254,667	374,180	+ 6,673	-60,948	-54,275
October	204,938	20,613	192,199	292,630	269,654	+33,352	+105,126	-71,774
November	227,916	17,755	230,109	261,097	236,774	+15,562	-32,880	-17,318
December	253,512	8,883	282,191	260,841	258,874	-19,796	+22,100	+ 2,304
Total	2,707,926	138,696	2,805,622	2,916,588	258,874	+41,000	-199,466	-158,466
1959								
January	257,682	12,377	270,995	248,574	284,545	- 936	+22,001	+21,065
February	244,405	12,737	264,018	243,741	304,303	- 6,876	+19,578	+12,882
March	270,248	17,019	285,425	270,768	319,241	+ 1,842	+14,938	+16,780
April	265,937	15,653	278,959	270,262	329,871	+ 2,631	+10,630	+13,261
May	279,747	11,344	284,108	266,783	350,772	+ 6,982	+20,901	+27,883

In U. S. A.

1957								
Total	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
April	86,123	11,475	120,467	81,930	251,099	.....	+12,458	.....
May	80,628	10,488	115,978	78,631	253,463	.....	+ 2,364	.....
June	71,092	10,980	107,918	100,796	244,450	.....	- 8,013	.....
July	64,444	8,858	110,130	77,523	242,781	.....	- 2,669	.....
August	67,917	8,999	100,640	86,982	215,560	.....	-27,221	.....
September	79,541	7,259	107,971	101,971	178,222	.....	-37,338	.....
October	92,214	19,865	113,288	120,793	128,490	.....	-49,732	.....
November	96,369	16,755	128,048	131,188	93,596	.....	-34,894	.....
December	97,641	7,911	146,978	116,310	80,722	.....	-100,302	.....
Total	1,008,170	131,294	1,446,540	1,179,416	80,722	.....	-12,874	.....
1959								
January	95,542	11,284	137,361	114,425	80,780	.....	+ 58	.....
February	88,432	11,425	142,235	120,134	85,523	.....	+ 4,743	.....
March	101,410	16,120	140,928	124,220	85,952	.....	- 2,751	.....
April	98,376	14,287	137,490	135,233	74,323	.....	- 8,629	.....
May	104,372	9,582	135,921	134,385	86,131	.....	+11,809	.....

Outside U. S. A.*

1957								
Total	1,783,119	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
April	129,338	471	106,428	128,482	250,067	.....	- 4,618	.....
May	137,759	702	109,793	134,302	245,053	.....	- 5,014	.....
June	143,191	584	120,469	140,029	231,373	.....	-13,680	.....
July	151,871	658	119,448	143,278	232,383	.....	+ 1,010	.....
August	156,756	475	117,274	160,134	220,916	.....	-11,467	.....
September	123,178	701	96,035	153,633	196,558	.....	-23,610	.....
October	112,724	748	78,911	171,827	141,164	.....	-55,394	.....
November	131,334	980	102,061	129,909	143,178	.....	+ 2,014	.....
December	155,871	972	135,213	144,531	178,152	.....	+34,974	.....
Total	1,699,756	7,402	1,359,082	1,737,172	178,152	.....	-99,164	.....
1959								
January	162,140	1,093	133,634	134,149	203,765	.....	+21,943	.....
February	155,973	1,312	121,783	123,607	218,780	.....	+15,015	.....
March	168,838	899	144,497	146,548	236,232	.....	+17,502	.....
April	161,561	1,366	141,469	135,029	255,548	.....	+19,259	.....
May	175,374	1,762	148,141	132,198	264,640	.....	+ 9,092	.....

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper Producers' Price, Del. Valley Monthly Average Prices (Cents Per Pound)

1956	1957	1958	1959
Jan. 43.00	36.00	25.69	29.00
Feb. 44.03	33.318	25.00	29.972
Mar. 46.00	32.00	25.00	31.14
Apr. 46.00	32.00	25.00	31.50
May 46.00	32.00	25.00	31.50
June 46.00	30.955	25.36	....
July 41.56	29.25	26.125	....
Aug. 40.00	28.639	26.50	....
Sept. 40.00	27.031	26.50	....
Oct. 39.308	27.00	27.548	....
Nov. 36.00	27.00	29.00	....
Dec. 36.00	27.00	29.00	....
Aver. 41.992	30.183	26.31	....

Electrolytic Copper Custom Smelters' Price, Del. Valley Monthly Average Prices (Cents Per Pound)

1956	1957	1958	1959
Jan. 50.22	34.87	24.577	29.429
Feb. 52.07	32.273	23.557	30.361
Mar. 53.11	30.952	23.326	33.21
Apr. 48.88	31.24	23.66	32.84
May 44.221	30.163	23.865	32.00
June 40.00	29.60	25.52	....
July 38.14	28.39	29.231	....
Aug. 39.32	27.862	26.52	....
Sept. 39.00	25.948	26.355	....
Oct. 37.192	25.722	28.577	....
Nov. 35.95	25.435	29.829	....
Dec. 35.45	25.26	28.846	....
Aver. 42.797	28.93	25.905	....

Lake Copper Producers' Price Delivered Monthly Average Prices (Cents Per Pound)

1956	1957	1958	1959
Jan. 43.00	36.00	25.69	29.00
Feb. 43.783	33.182	25.00	30.00
Mar. 46.00	32.00	25.00	31.14
Apr. 46.00	32.00	25.00	31.50
May 46.00	32.00	25.00	31.50
June 46.00	30.955	25.00	....
July 41.68	29.25	25.75	....
Aug. 40.00	28.611	26.50	....
Sept. 40.00	27.00	26.50	....
Oct. 39.321	27.00	27.577	....
Nov. 36.00	27.00	29.00	....
Dec. 36.00	27.00	29.00	....
Aver. 41.975	30.162	26.251	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined Cop. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Recd.
1953					
Total	380,881	25,022	309,664	170,917	1,375,869
1954					
Total	360,526	58,125	304,619	136,581	1,231,840
1955					
Total	.....	.....	.....	.....	— 22,549
1956					
Sept.	445,679	114,981	338,488	204,154	115,867 + 18,018
Oct.	440,706	112,893	336,856	198,517	119,440 + 18,226
Nov.	435,216	110,792	336,829	178,814	119,441 + 31,365
Dec.	437,187	117,601	336,217	183,834	99,223 + 34,737
Total	.....	.....	.....	.....	1,418,241
1957					
Jan.	435,635	107,231	335,944	178,326	119,517 + 28,596
Feb.	422,266	110,174	334,542	178,913	114,298 + 18,985
Mar.	429,410	104,551	338,454	164,623	106,170 + 30,884
Apr.	429,708	98,638	335,921	164,410	117,041 + 28,015
May	434,852	92,943	336,697	170,476	115,355 + 20,622
June	426,905	82,919	340,743	153,042	110,527 + 16,039
July	432,918	85,728	341,684	144,410	77,991 + 32,552
Aug.	429,627	82,768	344,315	144,375	110,323 + 23,826
Sept.	425,168	80,436	344,530	144,638	106,927 + 16,536
Oct.	420,130	80,774	341,869	138,420	119,161 + 20,615
Nov.	428,520	68,249	345,832	128,719	98,725 + 22,218
Dec.	430,171	75,627	347,465	138,631	83,067 + 19,702
Total	.....	.....	.....	.....	1,279,086
1958					
Jan.	445,514	57,917	348,426	123,756	94,642 + 31,249
Feb.	452,673	52,342	351,035	128,330	86,625 + 25,650
Mar.	448,125	71,693	346,875	141,387	83,694 + 31,556
Apr.	450,442	76,602	347,607	145,623	79,613 + 33,814
May	441,001	78,194	346,404	138,190	88,447 + 34,601
June	433,526	72,363	330,301	145,162	109,011 + 30,448
July	431,796	77,362	326,263	153,529	79,353 + 29,366
Aug.	421,931	78,194	323,667	150,436	96,717 + 26,022
Sept.	416,887	71,025	319,281	145,390	105,474 + 28,941
Oct.	399,113	91,019	315,929	156,692	138,017 + 17,511
Nov.	419,914	88,580	328,238	157,799	110,487 + 22,457
Dec.	447,123	90,401	326,438	177,869	92,573 + 35,217
Total	.....	.....	.....	.....	1,165,364
1959					
Jan.	457,387	101,182	337,761	172,698	108,556 + 44,070
Feb.	459,046	123,321	390,522	183,113	116,565 + 58,732
Mar.	449,441	130,785	334,904	211,547	133,259 + 33,775
Apr.	463,582	125,250	337,282	204,136	120,680 + 47,414

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511
Feb.	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	14,712
Mar.	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	19,522
Apr.	12,304	8,553	6,214	16,583	9,004	13,162	17,233	14,288	15,279	17,525
May	8,749	8,458	8,033	10,857	8,687	15,133	20,805	12,397	13,989	13,960
June	20,528	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	...
July	10,040	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	...
Aug.	10,452	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	...
Sept.	4,903	3,561	4,687	9,042	10,641	15,037	9,518	9,756	9,268	...
Oct.	9,459	3,336	4,802	10,065	11,662	12,897	15,570	13,151	23,088	...
Nov.	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	...
Dec.	7,178	4,538	6,298	11,476	14,876	13,180	14,613	11,237	10,796	...
Total	142,067	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	...

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS)

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	19,456	18,874	28,416	28,315	20,423	20,661	25,201	27,736	25,681	20,468	22,046
Feb.	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	23,746
Mar.	14,550	22,494	31,997	23,894	28,266	23,653	29,713	28,310	21,948	18,825	26,109
Apr.	10,695	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,005	26,115
May	11,114	23,643	33,267	21,740	21,660	22,269	23,709	23,437	22,037	17,191	23,967
June	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	...
July	10,220	21,609	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	...
Aug.	14,194	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	...
Sept.	16,209	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	...
Oct.	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	...
Nov.	18,488	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	...
Dec.	17,950	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	...
Total	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	...
Aver.	14,637	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,681	18,133	...

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Mine Production of Copper in United States

	(U. S. Bureau of Mines) (In short tons)			
	Eastern	Missouri	Western	
1956	Ttl.	79,681	2,130	1,018,496
1957	Sept.	6,083	132	79,623
	Oct.	4,614	147	82,992
	Nov.	7,063	70	80,848
	Dec.	6,962	67	81,080
	Ttl.	79,369	1,800	995,753
1958	Jan.	7,615	164	82,476
	Feb.	6,826	125	74,766
	Mar.	7,517	123	79,594
	April	7,035	161	76,911
	May	6,522	152	71,717
	June	5,801	155	62,296
	July	4,188	132	56,672
	Aug.	5,570	127	61,342
	Sept.	5,312	114	77,561
	Oct.	7,002	60	85,075
	Nov.	6,617	60	87,379
	Dec.	6,614	70	88,070
	Ttl.	76,849	1,250	902,021
1959	Jan.	6,590	126	90,386
	Feb.	5,883	130	81,889
	Mar.	6,513	140	91,383

Average Custom Smelters' Scrap Buying Prices

	(Cents per pound for carload lots del. consumers' works)			
	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	
1958	Feb.	.18.955	17.455	15.205
	Mar.	.19.21	17.71	15.46
	Apr.	.19.60	18.10	15.85
	May	.20.02	18.52	16.27
	June	.21.93	20.43	18.18
	July	.22.52	21.02	18.77
	Aug.	.22.62	21.12	18.87
	Sept.	.22.37	20.87	18.62
	Oct.	.24.80	23.30	21.05
	Nov.	.25.597	24.097	21.847
	Dec.	.24.356	22.856	20.606
	Aver.	.21.777	20.277	18.035
1959	Jan.	.25.29	23.79	21.54
	Feb.	.26.42	24.92	22.08
	Mar.	.28.79	27.29	25.04
	Apr.	.28.04	26.54	24.29
	May	.27.81	26.31	25.81

* Of dry content for material having a dry copper content in excess of 69%.

Brass Ingot Makers' Scrap Copper Buying Prices

	(Average Price) (Cents per pound per lb. of each grade)			
	No. 1 Composition Brass	No. 2 Composition Brass	Heavy Yellow Brass	
1958	Mar.	.19.21	17.71	11.88
	Apr.	.19.60	18.10	12.35
	May	.19.923	18.423	12.769
	June	.21.93	20.43	19.02
	July	.22.52	21.02	19.24
	Aug.	.22.62	21.12	19.11
	Sept.	.22.37	20.87	18.88
	Oct.	.24.80	23.30	20.51
	Nov.	.25.597	24.097	21.182
	Dec.	.24.356	22.856	19.038
	Aver.	.21.777	20.277	18.653
1959	Jan.	.25.29	23.79	19.70
	Feb.	.26.42	24.92	21.08
	Mar.	.28.79	27.29	22.85
	Apr.	.28.04	26.54	21.69
	May	.27.81	26.31	21.17

METALS, JUNE, 1959

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

REFINED PRODUCTION				DELIVERIES			STOCKS		
	Pig	Antimonial	Lead	Pig	Antimonial	Lead	Pig	Antimonial	Total
		Content	Total		Content	Total		Content	
1958									
Aug.	103,701	8,973	112,674	102,898	9,903	112,801	284,818	17,260	302,078
Sept.	116,283	8,806	125,089	121,929	7,986	129,915	279,172	18,080	297,252
Oct.	121,934	10,656	132,590	139,698	9,408	149,106	262,510	19,328	281,838
Nov.	120,951	8,971	129,922	112,495	9,381	121,876	273,033	18,918	291,951
Dec.	129,461	10,898	140,359	90,498	8,583	99,081	313,232	21,233	334,465
Total	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
1959									
Jan.	129,604	9,755	139,359	114,038	10,014	124,052	328,719	20,974	349,693
Feb.	114,528	8,944	123,472	90,915	9,094	100,009	347,455	20,824	368,279
Mar.	123,549	8,747	132,296	111,186	9,403	120,589	362,493	20,168	382,661
Apr.	127,995	10,398	138,393	137,702	10,345	148,047	334,178	20,221	354,399

U. S. A.

	Pig	Antimonial	Lead	Pig	Antimonial	Lead	Pig	Antimonial	Total
1958									
Aug.	34,275	4,890	39,165	50,145	4,956	55,101	201,759	11,150	212,909
Sept.	38,508	4,525	43,033	65,301	4,516	69,817	215,389	11,991	227,380
Oct.	40,225	5,153	45,378	70,580	4,455	75,035	207,335	12,728	220,063
Nov.	36,572	3,621	40,193	44,834	4,181	49,015	217,728	12,352	230,080
Dec.	39,504	4,307	43,811	31,869	3,737	35,606	239,049	13,417	252,466
Total	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
1959									
Jan.	40,110	3,365	43,475	48,311	4,492	52,803	244,870	12,426	257,296
Feb.	35,084	4,145	39,229	40,881	4,073	44,954	254,229	12,961	267,190
Mar.	35,140	3,868	39,008	49,742	4,279	54,021	248,166	12,744	260,910
Apr.	35,072	5,167	40,233	60,312	5,072	65,384	234,187	13,578	247,765

Outside U. S. A.

	Pig	Antimonial	Lead	Pig	Antimonial	Lead	Pig	Antimonial	Total
1958									
Aug.	69,426	4,083	73,509	52,753	4,947	57,700	83,059	6,110	89,169
Sept.	77,775	4,281	82,056	56,628	3,470	60,098	63,783	6,089	69,872
Oct.	81,709	5,503	87,212	69,118	4,953	74,071	55,175	6,600	61,775
Nov.	84,379	5,350	89,729	67,661	5,200	72,861	55,305	6,566	61,871
Dec.	89,957	6,591	96,548	58,829	4,846	63,475	74,183	7,816	81,999
Total	1,012,074	59,398	1,071,472	717,862	52,804	710,666	.....	.....	.....
1959									
Jan.	89,494	6,390	95,884	65,727	5,522	71,249	83,849	8,548	92,397
Feb.	79,444	4,799	84,243	50,034	5,021	55,055	93,226	7,863	101,089
Mar.	88,409	4,879	93,288	61,444	5,124	66,568	114,327	7,424	121,751
Apr.	92,923	5,231	98,154	77,390	5,273	82,663	99,991	6,643	106,634

Summary of Lead Statistics for United States

Recoverable Lead Content In Tons of 2,000 Pounds	Raw Material at Smelter	Stocks (end of period)			Smelter Receipts				
		Base Bullion	At Smelter & Transit	At Refinery and Process	Refined Pig and Antimonial	Total	Primary U.S.A.	Origin Outside U.S.A.	Scrap
1958									
June	77,858	4,420	28,254	206,319	316,851	30,230	14,022	3,135	45,567
July	81,103	4,848	30,065	211,976	327,992	23,440	19,665	1,629	44,734
August	75,116	4,794	33,863	212,909	326,682	23,898	13,145	1,269	38,312
September	70,290	4,948	32,606	227,380	335,224	21,775	14,937	1,673	38,385
October	58,863	4,773	29,833	220,063	313,532	19,630	9,205	3,699	32,534
November	60,222	3,573	30,208	230,080	324,083	23,603	15,932	3,869	43,404
December	68,197	4,489	28,955	252,466	354,107	25,544	18,921	4,090	43,555
Total	.....	.....	.....	.....	.....	297,687	191,415	29,080	518,182
1959									
January	69,015	4,243	31,577	257,296	362,131	24,031	19,185	3,167	47,283
February	58,921	2,919	35,062	267,190	364,092	22,934	8,435	1,772	33,141
March	65,478	4,283	33,815	260,910	364,486	22,258	21,368	1,426	45,052
April	61,779	4,424	31,596	247,765	345,564	22,868	11,344	1,214	35,426
Smelter Production									
		Pig		Refined Productions					
				Antimonial					
				Total					
1958		43,662		40,795	3,600	44,395	45,640	4,409	50,049
June		40,328		36,052	2,681	38,733	47,381	5,263	52,644
July		41,099		34,275	4,890	39,165	50,145	4,956	55,101
August		42,473		38,508	4,525	43,033	65,301	4,516	69,817
September		41,975		40,225	5,153	45,378	70,580	4,455	75,035
October		41,365		36,572	3,621	40,193	44,834	4,181	49,015
November		39,972		39,504	4,307	43,811	31,869	3,737	35,606
December		512,323		473,208	46,985	520,193	589,528	49,893	639,421
1959									
January		45,938		40,110	3,365	43,475	48,311	4,492	52,803
February		40,655		35,084	4,145	39,229	40,881	4,073	44,954
March		38,138		35,140	3,868	39,008	49,742	4,279	54,021
April		38,614		35,072	5,167	40,239	60,312	5,072	65,384

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
Total	....	613,293	644,382	....	529,484
1957					
August	68,009	48,191	116,200	60,633	49,406
September	60,633	50,436	111,069	54,682	51,859
October	54,682	52,041	106,723	59,041	40,447
November	59,041	48,771	107,812	70,874	32,193
December	70,874	50,500	121,374	91,598	24,108
Total	....	604,353	645,534	....	463,060
1958					
January	91,598	47,665	139,263	101,206	33,422
February	101,206	47,133	148,339	119,522	23,832
March	119,522	43,441	162,963	128,754	28,885
April	128,754	40,984	169,738	143,136	22,172
May	143,136	47,487	190,623	155,121	30,021
June	155,121	44,636	199,757	163,504	32,078
July	163,504	38,827	202,331	164,880	31,948
August	164,860	39,520	204,380	169,302	34,254
September	169,302	43,269	212,571	170,666	41,657
October	170,666	45,467	216,133	169,435	46,647
November	169,435	40,485	209,920	179,321	30,591
December	179,321	44,042	223,363	198,538	24,852
Total	....	522,956	614,554	....	380,359
1959					
January	198,508	43,652	242,160	208,874	33,035
February	208,874	39,498	248,372	214,946	30,685
March	214,946	39,238	254,184	210,524	40,980
April	210,524	40,606	251,130	197,823	52,469

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sun-dries	Jobbers	Unclassified
1955								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,084	270,251
1956								
Nov.	6,096	2,351	...	8,556	226	5,573	792	23,755
Dec.	6,440	1,440	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,861	13,213	274,716
1957								
Jan.	5,297	2,800	200	6,886	671	4,002	1,191	19,502
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	...	6,479	686	4,614	1,064	18,674
April	6,731	2,250	...	6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,260
Aug.	5,408	2,250	220	6,165	650	6,246	1,403	27,068
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367
Nov.	2,950	2,500	85	3,126	493	3,800	706	18,533
Dec.	2,499	1,350	36	2,820	270	2,607	529	13,997
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
Jan.	2,938	550	70	4,775	521	5,173	801	18,594
Feb.	2,899	1,750	70	5,124	90	1,643	888	11,368
Mar.	3,133	1,200	35	4,711	681	3,149	908	15,068
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592
1959								
Jan.	2,284	2,100	100	5,594	161	3,545	727	18,524
Feb.	2,988	1,225	50	5,254	735	2,706	931	16,796
Mar.	3,156	1,850	105	5,905	378	6,006	2,185	21,395
April	3,686	2,150	35	7,410	691	5,356	1,966	31,355

Lead Prices at New York

(Common Grade)

Monthly Average Prices

(Cents per pound)

	1956	1957	1958	1959
Jan.	16.16	16.00	13.00	12.619
Feb.	16.00	16.00	13.00	11.583
Mar.	16.00	16.00	13.00	11.42
Apr.	16.00	16.00	12.00	11.20
May	16.00	15.385	11.712	11.905
June	16.00	14.32	11.24	...
July	16.00	14.00	11.00	...
Aug.	16.00	14.00	10.85	...
Sept.	16.00	14.00	10.89	...
Oct.	16.00	13.704	12.673	...
Nov.	16.00	13.50	13.00	...
Dec.	16.00	13.00	13.00	...
Aver.	16.013	14.66	12.114	...

Lead Sheet Prices

(To Jobbers, Full Sheets)

Monthly Average Prices

(Cents per pound)

	1956	1957	1958	1959
Jan.	21.66	21.50	18.50	18.119
Feb.	21.50	21.50	18.50	17.083
Mar.	21.50	21.50	18.50	16.92
Apr.	21.50	21.50	17.50	16.70
May	21.50	20.885	17.212	17.405
June	21.50	19.82	16.74	...
July	21.50	19.82	16.50	...
Aug.	21.50	19.50	16.35	...
Sept.	21.50	19.50	16.39	...
Oct.	21.50	19.204	18.173	...
Nov.	21.50	19.00	18.50	...
Dec.	21.50	18.50	18.50	...

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1956	1957	1958	1959
Jan.	2,058	2,638	2,004	2,672
Feb.	1,340	1,961	1,803	1,791
Mar.	1,348	1,254	1,577	1,376
Apr.	1,368	1,178	1,242	1,436
May	1,761	1,605	1,454	...
June	1,807	1,878	1,773	...
July	2,178	2,469	2,101	...
Aug.	2,571	2,856	2,333	...
Sept.	2,711	2,688	2,704	...
Oct.	3,015	3,042	2,976	...
Nov.	2,592	2,359	2,262	...
Dec.	2,265	2,015	3,036	...
Total	25,014	25,943	25,265	...

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	—In base bullion (lead content)—					Total Stocks
	At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Antimoni- al lead		
1957							
Mar. 1..	81,274	11,880	4,394	25,728	38,479	10,220	171,975
Apr. 1..	82,461	14,598	3,593	25,401	36,390	9,794	172,237
May 1..	81,061	17,035	2,705	20,890	48,053	9,391	179,135
June 1..	81,364	11,585	3,071	21,002	48,286	9,799	175,107
July 1..	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1..	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1..	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1..	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1..	76,230	14,220	2,538	18,695	47,460	11,581	170,724
Dec. 1..	65,341	11,646	3,547	21,867	59,755	11,119	173,275
1958							
Jan. 1..	79,362	11,019	2,779	23,154	79,741	11,857	207,912
Feb. 1..	79,738	11,510	3,678	24,535	88,517	12,689	220,667
Mar. 1..	79,588	9,546	3,670	22,834	107,213	12,309	235,250
Apr. 1..	83,185	10,692	2,187	21,766	116,610	12,144	246,584
May 1..	86,053	11,838	2,138	20,524	130,668	12,468	263,689
June 1..	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1..	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1..	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1..	77,416	14,767	1,176	20,444	158,413	10,889	283,105
Oct. 1..	72,724	14,797	2,223	18,125	159,662	11,004	278,535
Nov. 1..	61,819	11,492	1,086	19,041	157,385	12,050	262,873
Dec. 1..	62,960	11,072	1,565	20,941	167,493	11,828	275,859
1959							
Jan. 1..	72,378	10,917	1,767	19,746	185,913	12,595	303,316
Feb. 1..	72,832	10,565	1,889	21,317	197,085	11,789	315,477
Mar. 1..	62,383	11,707	1,447	21,479	202,835	12,111	311,962
Apr. 1..	68,433	14,352	350	20,575	198,459	12,065	314,234
May 1..	64,538	12,373	624	20,507	184,468	13,355	295,865

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap	Total receipts in ore, & scrap
	United States	Foreign	Total	(b)	
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956	Total	368,499	192,318	560,817	55,925
1957	March	33,445	18,813	52,258	3,058
	April	31,343	13,042	44,385	2,848
	May	32,138	12,324	44,462	3,431
	June	29,896	19,592	49,488	2,272
	July	29,585	17,938	47,521	2,893
	August	29,225	18,774	47,999	3,190
	September	26,479	13,757	40,236	4,375
	October	29,342	13,782	43,124	4,386
	November	25,809	17,251	43,060	3,258
	December	27,105	26,610	53,715	3,791
	Total	356,409	206,901	563,310	42,537
1958	January	25,537	22,097	47,634	3,507
	February	23,789	16,400	40,189	2,184
	March	21,735	20,038	41,773	3,154
	April	25,104	15,821	40,925	1,913
	May	27,427	10,228	37,655	1,867
	June	28,577	13,811	42,388	1,366
	July	22,289	19,692	41,891	1,615
	August	22,984	13,043	36,027	1,252
	September	20,654	14,576	35,230	1,765
	October	18,678	9,093	27,771	3,577
	November	24,024	14,541	38,565	3,933
	December	24,366	18,804	43,170	3,982
	Total	285,164	188,144	473,308	30,115
1959	January	24,304	19,449	43,753	3,138
	February	22,253	8,660	30,913	1,747
	March	21,897	21,012	42,909	1,328
	April	22,339	10,998	33,337	1,196

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) Inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1951	Oct. 2..	**19.00	Apr. 1..	13.75
	1952		Apr. 12..	14.00
			June 2..	14.25
			May 1..	14.25
			June 23..	14.50
			July 1..	14.50
			Aug. 25..	14.75
			Sept. 7..	14.50
			Oct. 4..	14.875
			Oct. 5..	15.00
			1955	
			Oct. 22..	13.50
			Nov. 8..	14.00
			Nov. 10..	14.20
			Nov. 11..	14.50
			Nov. 20..	14.25
			Nov. 24..	14.00
			Dec. 22..	14.25
			Dec. 29..	14.00
			1956	
			Jan. 1..	16.50
			Jan. 13..	16.00
			Dec. 29..	14.50
			Dec. 31..	14.75
			1957	
			May 9..	15.50
			May 16..	15.00
			Jan. 7..	14.50
			Jan. 12..	14.00
			Feb. 2..	13.50
			Mar. 4..	13.90
			Mar. 10..	13.50
			Apr. 7..	13.00
			Apr. 16..	12.50
			Apr. 21..	12.00
			July 1..	11.00
			May 18..	12.75
			May 19..	13.00
			May 26..	13.15
			June 11..	13.50
			July 20..	13.75
			July 23..	14.00
			Sept. 16..	13.50
			1959	
			Jan. 21..	12.00
			Feb. 11..	11.50
			Feb. 24..	11.00
			Mar. 9..	12.75
			Mar. 10..	13.00
			April 20..	11.50
			Mar. 29..	13.50
			May 7..	12.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

End of	1956	1957	1958	1959
Jan.	8,389	10,487	12,889	11,789
Feb.	9,095	10,220	12,309	12,111
Mar.	10,289	9,794	12,144	12,065
Apr.	10,690	9,391	12,468	13,365
May	10,902	9,799	13,154	...
June	9,452	9,503	12,856	...
July	10,924	8,661	10,482	...
Aug.	10,074	9,553	10,889	...
Sept.	11,181	10,215	11,004	...
Oct.	11,382	11,581	12,050	...
Nov.	11,832	11,119	11,828	...
Dec.	11,746	11,857	12,595	...

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

End of	1956	1957	1958	1959
Jan.	5,045	5,113	3,743	3,541
Feb.	5,888	5,468	3,657	4,415
Mar.	5,526	5,091	3,527	4,098
Apr.	5,818	6,183	3,655	5,533
May	5,405	6,978	4,827	...
June	4,456	4,466	3,992	...
July	3,853	5,372	2,775	...
Aug.	5,343	7,967	5,244	...
Sept.	6,709	7,574	4,761	...
Oct.	5,378	6,148	5,849	...
Nov.	6,993	3,791	3,913	...
Dec.	5,766	3,290	4,539	...

Total 66,180 67,541 50,482 ...

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

IMPORTS

	Jan.	Feb.	Mar.	1959
U. S.† (s.t.)	16,979	14,609	34,850	
Canada (s.t.)	84	...	...
Belgium	1,278	...	...
Denmark	1,423	762	...	
France	3,858	692	3,872	
Germany, West††	3,406	...	...
Netherlands	2,773	2,746	3,078	
Norway	463	...	...
Sweden	527	...	...
Switzerland	1,719	1,237	1,738	
U. K. (l.t.)	19,621	8,479	22,251	
India* (l.t.)	2,296	2,070	...	

EXPORTS

	Jan.	Feb.	Mar.	1959
U. S.† (s.t.)	277	68	433	
Canada (s.t.)	5,034	6,376	11,831	
Belgium	4,011	...	...
Denmark	474	419	...	
France	2,310	1,554	2,631	
Germany, West††	3,855	...	...
Netherlands	343	507	568	
Sweden	163	...	...
Switzerland	...	7	...	
Northern Rhodesia* (l.t.)	734	670	1,032	
Australia* (l.t.)	15,983	10,388	8,287	

† Refined.

†† Includes scrap.

* British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	Feb.	Mar.	Apr.	1959
Ore (gr. wt.)	9,529	5,737	15,685	
Algeria	...	840	855	
Morocco	9,529	4,522	13,780	
Fr. Eq. Africa	...	375	1,050	
Pig lead	692	3,872	3,818	
Belgium	46	30	1,093	
Germany (W.)	17	..	505	
Netherlands	1	...	...
Algeria	12	14	72	
Morocco	403	1,434	804	
Tunisia	202	2,394	1,066	
Australia	...	...	278	
Other countries	11	...	...
Antimonial lead	22	18	2	

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	Feb.	Mar.	Apr.	1959
(Gross Weight)				
Lead and lead alloys	8,479	22,251	23,538	
Australia	2,530	16,259	15,099	
Canada	4,482	4,586	4,621	
Belgium	100	100	...	
Peru	100	100	3,818	
Other countries	1,267	1,206	...	

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U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

1959

Metal Products:	Jan.-Mar. totals	Feb.	Mar.
Ammunition	10,988	3,520	3,899
Bearing metals	5,449	1,800	1,966
Brass and bronze	5,967	1,895	2,283
Cable covering	16,023	4,918	5,812
Calking lead	16,110	5,331	5,307
Casting metals	2,140	721	635
Collapsible tubes	1,760	679	697
Foil	892	306	250
Pipes, traps and bends	5,276	1,759	1,795
Sheet lead	6,761	2,259	2,350
Solder	16,083	5,284	5,568
Storage battery grids, posts, etc.	41,791	13,670	13,110
Storage battery oxides	43,543	14,083	13,517
Terne metal	490	244	95
Type metal	6,783	2,341	2,384

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1957	1958	1959
Jan.	29,657	29,607	28,872
Feb.	29,219	27,855	25,968
Mar.	29,144	29,713	26,691
Apr.	27,246	26,230	29,252
May	31,574	28,839	...
June	28,607	28,624	...
July	27,604	27,201	...
Aug.	24,756	21,726	...
Sept.	29,519	28,829	...
Oct.	32,486	31,356	...
Nov.	31,060	28,786	...
Dec.	26,530	27,154	...

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1956	1957	1958	1959
Jan.	33.00	33.00	33.00	29.00
Feb.	33.00	33.00	30.818	29.00
Mar.	33.00	33.00	29.00	29.00
Apr.	33.00	33.00	29.00	29.00
May	33.00	33.00	29.00	29.00
June	33.00	33.00	29.00	29.00
July	33.00	33.00	29.00	...
Aug.	33.00	33.00	29.00	...
Sept.	33.00	33.00	29.00	...
Oct.	33.00	33.00	29.00	...
Nov.	33.00	33.00	29.00	...
Dec.	33.00	33.00	29.00	...
Aver.	33.00	33.00	29.485	...

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Feb. 28, 1959	Net Receipts in Mar.	Consumed in Mar.	Stocks Mar. 31 1959
Soft lead	69,294	64,193	54,360	79,127
Antimonial lead	37,029	18,545	19,483	36,091
Lead in alloys	6,986	4,112	4,129	6,969
Lead in copper-base scrap	1,330	1,575	1,739	1,166
Total	114,639	88,425	*79,711	123,353

* Excludes 3,053 tons of lead which went directly from scrap to fabricated products and 334 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

MARCH

	Soft lead	Antimonial lead	Lead in alloys	Lead in copper-base scrap	Total
Metal products	32,016	18,882	4,092	1,739	56,729
Pigments	7,746	4	...	...	7,750
Chemicals	12,723	...	...	...	12,723
Miscellaneous	730	499	...	...	1,229
Unclassified	1,145	98	37	...	1,280
Total	54,360	19,483	4,129	1,739	*79,711

* Excludes 3,053 tons of lead which went directly from scrap to fabricated products and 334 tons of lead contained in leaded zinc oxide production.

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Begin- ning	Pro- duction	Domes- tic	Export & Drawback	Gov't Acc't	Total	Stock at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,884	931,833	836,800	42,067	39,946	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,229	76,568		
1952 Total	21,901	961,430	803,343	56,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		65,918	83,968	1,626	7,267	92,860		
1956 Total	1,062,954	869,270	9,027	157,014	1,035,811	68,622	2,904	
1956 Mo. Avg.		88,850	72,439	752	13,085	86,275		
1957								
February		78,974	88,078	67,731	1,527	10,905	80,163	86,889
March		86,889	96,924	67,441	1,558	25,608	94,607	89,357
April		89,357	96,506	55,000	1,411	23,921	80,332	105,531
May		105,531	96,855	60,729	2,106	26,858	89,693	112,693
June		112,693	90,719	54,275	1,858	14,324	69,957	123,455
July		133,455	85,779	57,862	4,497	11,186	73,055	146,179
August		146,179	84,166	70,318	1,660	9,871	81,049	149,296
September		149,296	77,455	62,111	530	10,344	72,985	153,766
October		153,766	81,492	66,225	372	12,736	79,333	155,925
November		155,925	79,754	73,437	581	9,148	83,166	152,531
December		152,531	86,270	62,730	210	9,188	72,128	166,655
1957 Total		1,067,450	765,132	15,460	179,466	815,567		2,783
1958								
January		166,655	82,343	56,211	641	9,805	68,657	180,346
February		180,346	68,354	49,072	446	9,993	59,511	189,189
March		189,189	72,274	48,948	111	8,763	57,822	203,641
April		203,641	70,214	46,598	159	5,927	52,684	221,171
May		221,171	71,018	51,390	129	—	52,519	240,670
June		240,670	66,967	54,487	171	—	54,658	252,979
July		252,979	65,119	60,312	55	—	60,187	257,911
August		257,911	62,927	68,718	591	—	69,209	251,520
September		251,529	63,705	76,905	213	—	77,118	238,116
October		238,116	65,304	93,018	226	—	93,224	210,176
November		210,176	65,174	83,394	212	—	83,606	191,744
December		191,744	75,508	76,862	148	—	77,010	190,287
1958 Total		828,902	767,755	3,102	34,488	805,325	—	—
1959								
January		190,237	76,481	70,770	171	—	70,941	195,777
February		195,777	71,174	65,641	849	—	66,490	200,461
March		200,461	79,918	73,814	482	—	74,296	206,083
April		206,083	76,393	78,358	255	—	78,613	203,863
May		203,863	77,489	85,073	275	—	85,348	196,004
1959							2,500	

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvan- izers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1950 Total	434,094	281,385	136,451	67,770	27,656	947,366
1951 Total	386,378	266,442	141,456	64,000	28,788	887,009
1952 Total	375,563	236,022	155,311	51,508	30,886	849,289
1953 Total	408,162	306,846	177,301	58,784	38,087	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 Total	421,218	352,451	122,395	45,382	36,251	983,097
1957						
February		31,686	32,520	9,156	3,284	3,206
March		30,747	30,946	8,860	3,553	3,378
April		30,631	29,166	9,491	4,001	3,300
May		30,537	28,423	9,563	3,389	3,097
June		29,907	27,688	8,710	3,613	2,646
July		26,067	26,116	6,361	2,698	2,981
August		27,885	29,237	9,755	3,686	3,099
September		28,651	31,051	9,588	2,911	1,590
October		32,940	35,499	10,952	3,385	1,783
November		28,025	31,396	10,024	2,843	1,255
December		24,383	27,927	7,854	2,679	1,427
Total		355,796	358,543	111,114	39,544	20,486
1958						
January		26,861	26,348	9,115	3,183	1,664
February		24,598	22,629	7,279	2,716	1,316
March		27,171	19,045	6,871	3,138	1,724
April		27,464	17,829	6,392	3,259	1,295
May		30,935	18,316	6,597	2,896	2,263
June		34,377	21,497	6,643	2,961	2,212
July		30,677	17,387	6,275	2,848	1,920
August		34,663	20,382	8,358	3,379	1,901
September		34,048	25,188	9,624	3,458	770
October		36,513	27,682	11,753	3,845	881
November		31,658	27,311	10,067	3,276	826
December		31,746	29,926	10,529	3,681	1,018
Total		370,441	273,540	92,906	38,690	16,772
1959						
January		31,729	29,110	11,172	3,874	2,521
February		31,672	26,448	11,508	3,418	2,864
March		37,287	29,286	12,889	3,629	3,203

METALS, JUNE, 1959

Prime Western Zinc Prices (East St. Louis, f.o.b.)

(Cents per pound)

(In tons of 2,240 pounds)

	1956	1957	1958	1959
Jan.	13.46	13.50	10.00	11.50
Feb.	13.50	13.50	10.00	11.411
Mar.	13.50	13.50	10.00	11.00
Apr.	13.50	13.50	10.00	11.00
May	13.50	11.933	10.00	11.00
June	13.50	10.84	10.00	—
July	13.50	10.00	10.00	—
Aug.	13.50	10.00	10.00	—
Sept.	13.50	10.00	10.00	—
Oct.	13.50	10.00	10.865	—
Nov.	13.50	10.00	11.386	—
Dec.	13.50	10.00	11.50	—
Aver.	13.497	11.40	10.313	—

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1956	1957	1958	1959
Jan.	14.81	14.85	11.35	12.50
Feb.	14.85	14.85	11.35	12.411
Mar.	14.85	14.85	11.35	12.00
Apr.	14.85	14.85	11.084	12.00
May	14.85	13.283	11.00	12.00
June	14.85	12.19	11.00	—
July	14.85	11.35	11.00	—
Aug.	14.85	11.35	11.00	—
Sept.	14.85	11.35	11.00	—
Oct.	14.85	11.35	11.865	—
Nov.	14.85	11.35	12.386	—
Dec.	14.85	11.35	12.50	—
Aver.	14.847	12.75	11.407	—

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In Tons of 2,240 Pounds)

	1957	1958	1959
Jan.	28,485	27,473	27,849
Feb.	26,276	24,551	25,676
Mar.	27,049	26,967	27,243
Apr.	24,247	24,984	28,006
May	29,589	24,579	—
June	25,202	25,587	—
July	25,934	23,794	—
Aug.	20,381	19,076	—
Sept.	27,792	26,747	—
Oct.	29,552	29,838	—
Nov.	26,705	26,432	—
Dec.	24,419	26,042	—
Total	315,631	306,070	—

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Mine Production of Zinc in United States

(U. S. Bureau of Mines)

	(In short tons)			Total U.S.*
	Eastern States	Central States	Western States	
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
Oct.	17,839	188	21,323	34,390
Nov.	14,874	180	19,213	34,967
Dec.	13,893	173	18,683	34,364
Total	196,877	29,506	290,151	520,128
1958				
Jan.	16,165	1,682	20,861	38,708
Feb.	13,652	1,365	18,528	33,545
Mar.	13,922	1,291	20,411	35,624
Apr.	15,719	1,311	22,375	39,405
May	15,580	1,314	18,940	35,834
June	14,931	1,490	16,650	32,971
July	13,427	—	15,985	29,442
Aug.	15,760	—	13,627	29,387
Sept.	14,857	—	15,279	29,865
Oct.	16,197	—	16,074	32,271
Nov.	15,393	—	16,998	32,391
Dec.	15,064	—	16,839	32,003
Total	181,202	8,450	213,267	402,919
1959				
Jan.	16,319	—	19,117	35,436
Feb.	16,405	—	19,304	35,709
Mar.	17,602	—	18,488	36,090
Apr.	18,521	—	18,882	36,424

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

	(In short tons)			Total U.S.*
	Eastern States	Central States	Western States	
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	9,300	135,800	188,392	333,493
1957				
Ttl.	11,395	141,900	195,034	348,329
1958				
Jan.	675	12,513	12,613	25,801
Feb.	542	11,356	11,734	23,632
Mar.	526	4,633	13,148	18,307
Apr.	487	12,438	12,739	25,664
May	626	11,660	11,939	24,225
June	615	10,662	11,499	22,776
July	454	10,019	10,662	21,135
Aug.	447	8,859	9,512	18,818
Sept.	389	7,734	11,221	19,344
Oct.	517	9,290	11,467	21,274
Nov.	606	10,500	11,823	22,929
Dec.	565	9,600	11,699	21,865
Ttl.	6,816	119,070	140,033	265,920

Mine Production of Gold in United States

(U. S. Bureau of Mines)
(In fine ounces)

	Eastern States	Western States	Alaska*	Total	
1955	Ttl. 2,026	1,634,625	247,535	1,884,186	
1956	Ttl. 1,998	1,607,930	204,300	1,814,228	
1957	Nov. 182	125,796	27,000	152,978	
Dec. 181	123,250	6,790	130,221		
Ttl.	2,174	1,556,450	210,000	1,768,624	
1958	Jan. 207	134,282	2,736	137,226	
Feb. 147	116,392	59	116,598		
Mar. 174	123,808	96	124,078		
Apr. 192	124,705	906	125,615		
May 203	124,490	557	125,520		
June 182	122,277	8,484	130,943		
July 38	116,775	29,735	146,528		
Aug. 174	113,281	34,947	148,202		
Sept. 156	128,613	38,960	167,459		
Oct. 186	135,882	42,467	178,535		
Nov. —	—	—	—		
Dec. —	—	10,373	144,757		
1959	Jan. —	—	1,003	145,077	
Feb. —	—	—	233	128,614	
Mar. —	—	—	106	136,648	

* Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.*	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957			
Oct.	3,334	3,419	6,753
Nov.	2,731	3,374	6,105
Dec.	3,029	2,872	5,901
Total	36,279	34,932	71,211
1958			
January . . .	3,520	3,551	7,071
February . . .	3,589	2,790	6,379
March	2,465	3,568	6,033
April	3,123	3,056	6,179
May	2,597	2,660	5,257
June	3,243	3,210	6,453
July	2,127	2,494	4,621
August	2,651	3,235	5,886
September . . .	2,614	3,165	5,779
October	3,831	2,750	6,581
November . . .	2,505	3,283	5,788
December . . .	3,275	3,652	6,927
Total	35,540	37,414	72,954
1959			
January . . .	2,330	4,460	6,790
February . . .	2,827	2,913	5,740
March	2,823	4,087	6,910
April	2,946	3,233	6,179

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Average Silver Prices

	(Cents per fine ounce)	1956	1957	1958	1959
Jan.	90.357	91.375	89.449	90.19	
Feb.	90.90	91.375	88.625	90.444	
Mar.	91.128	91.375	88.625	91.351	
Apr.	90.875	91.375	88.625	91.375	
Mav	90.75	91.307	88.625	91.375	
June	90.46	90.456	88.625	—	
July	90.14	90.31	88.625	—	
Aug.	90.614	90.909	88.625	—	
Sept.	90.75	90.602	88.673	—	
Oct.	90.722	90.625	89.966	—	
Nov.	91.375	90.382	90.125	—	
Dec.	91.375	89.80	89.932	—	
Aver.	90.79	90.824	89.043	—	

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

METALS, JUNE, 1959

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

	(In short tons)								
	1952	1953	1954	1955	1956	1957	1958	1959	
Jan.	76,934	89,895	116,247	128,203	140,394	147,029	139,910	156,708	
Feb.	72,374	92,649	110,483	116,236	132,763	119,059	121,980	142,116	
Mar.	77,069	104,460	122,339	130,272	145,895	135,706	134,019	157,189	
Apr.	76,880	102,071	120,434	126,394	144,726	139,152	128,559	155,213	
May	80,803	105,464	125,138	131,128	150,800	145,174	129,083	163,857	
June	77,476	104,152	120,758	127,634	145,726	138,007	115,325	—	
July	78,368	109,285	126,161	132,669	151,624	142,157	118,811	—	
Aug.	85,175	110,545	125,296	133,551	92,406	143,449	125,416	—	
Sept.	76,882	109,333	120,332	130,606	132,316	129,278	124,713	—	
Oct.	77,312	108,219	125,089	134,655	149,125	133,759	139,847	—	
Nov.	74,639	105,636	121,252	133,689	145,081	135,024	140,962	—	
Dec.	83,419	110,291	127,056	140,748	148,391	140,033	153,301	—	
Ttl.	937,330	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,565,556	—	

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U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Feb.	Mar.	Apr.
Ore, matte & regulus (cont.)	5,377	8,932	4,624
Canada	470	31	456
Mexico	213	235	157
Cuba	1,075	...	...
Argentina	10	...	11
Bolivia	480	883	...
Chile	2,513	883	...
Peru	153	815	87
Philippines	2,701	1,581	...
U. S. Africa	3,990	1,525	1,370
Australia	60	31	77
Other countries	1	6	2
Blister copper (content)	21,844	23,636	20,678
Mexico	1,716	2,692	1,359
Chile	18,968	16,325	14,517
Peru	605	...	...
Rhodesia & Nyasaland	1,852	1,478	...
U. S. Africa	555	555	1,111
Australia	2,212	2,209	...
Other countries	...	...	4
Refined cathodes and shapes	3,548	3,815	5,027
Canada	2,703	3,767	4,003
Mexico	...	...	28
Chile	200	...	100
Peru	595	...	...
Sweden	...	...	560
Rhodesia & Nyasaland	50	...	336
Other countries	...	48	...
Total Imports:	30,769	36,383	30,329
Crude & refined	30,769	36,383	30,329
Old and scrap (content)	273	351	300
Brass scrap and old (cu. cont.)	32	420	120

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Feb.	Mar.	Apr.
Copper scrap, unalloyed* (new and old)	975	928	1,533
Canada	292	21	339
Belgium	11	...	...
Germany (W.)	231	287	88
Hungary	...	28	83
Italy	...	...	139
Spain	...	50	...
India	160	64	66
Japan	89	56	...
Other countries	192	422	818†
Copper-base scrap, alloyed† (new and old)	3,188	2,620	2,029
Canada	4	...	4
Mexico	...	1	...
Belgium	...	25	...
France	...	13	...
Germany (W.)	275	429	148
Italy	22	5	...
Netherlands	193	160	54
Portugal	...	17	...
Spain	4	...	34
India	136	144	76
Japan	2,318	1,700	1,568
Hong Kong	50	104	130
Other countries	186	22	15

* Ash, brass mill, clippings, dross, flux dust, residues, scale, skimmings, wire scrap.

† Copper-base alloys, including brass and bronze.

—Ashes, clippings for remanufacture, cupronickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

‡ To Argentina.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Feb.	Mar.	Apr.
Ore, conc., matte & other unref. (cont.)	618	401	38
Refined ingots, bars, etc.†	20,816	19,404	20,571
Canada	570	375	141
Cuba	...	3	1
Argentina	882	496	110
Brazil	736	589	881
Belgium	...	17	...
Denmark	369	112	112
France	4,874	7,723	8,305
Germany (W.)	2,428	2,222	5,458
Italy	1,497	2,040	1,825
Netherlands	934	644	261
Norway	336	280	280
Sweden	...	307	112
Switzerland	503	672	112
U. Kingdom	6,408	3,546	2,574
Yugoslavia	560	...	...
India	95	...	...
Japan	566	82	205
Australia	...	280	168
Other countries	58	33	9
Total Exports:	21,434	19,805	20,609
Crude & refined	21,434	19,805	20,609
Pipes and tubes	79	62	148
Plates and sheets	29	51	19
Semifabricated forms	45	192	605
Wire, bare	188	180	182
Building wire and cable	226	242	233
Weatherproof wire	...	4	6
Insulated copper wire n.e.s.‡	704	745	644

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

‡ Gross weight; n.e.s. — not elsewhere specified.

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Feb.	Mar.	Apr.
Zinc ore (content)	51,165	36,892	48,955
Canada	11,871	13,857	11,164
Mexico	17,657	11,184	8,367
Honduras	43	260	250
Bolivia	...	576	...
Chile	446	...	...
Peru	7,168	8,345	7,949
Italy	3,448	...	4,733
Spain	7,269	...	4,853
U. S. Africa	312	2,374	455
Australia	2,702	233	10,686
Philippines	...	4	11
Other countries	159	59	189
Russia*	...	...	298
Zinc blocks, pigs, etc.	6,807	16,005	6,505
Canada	3,877	11,143	3,281
Mexico	693	238	670
Peru	600	525	302
Belgium	...	1,532	771
Italy	193	1,020	960
Belgian Congo	1,052	1,547	149
Rhodesia & Nyasaland	392	...	...
Australia	...	...	372
Total Imports:	57,972	52,897	55,460
Zinc ore, blocks, pigs	57,972	52,897	55,460
Dross and skim	...	48	122
Old and worn out	11	30	1

* According to the records of the Bureau of the Census. (Subject to verification.)

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

	(In tons of 2,000 lbs.)		
	Feb.	Mar.	Apr.
Ore, matte, etc. (content)	9,698	20,031	9,333
Canada	4,626	2,549	1,573
Greenland	14	...	...
Mexico	82	53	...
Honduras	107	609	249
Bolivia	122	3,332	...
Chile	113	...	...
Peru	3,896	7,011	887
U. S. Africa	519	5,079	4,323
Australia	409	1,183	2,196
Philippines	...	56	28
Other countries	5	17	24
Base bullion (content)	...	...	5
Other countries	14,609	34,850	24,258
Pigs and bars	1,016	4,451	3,331
Canada	4,681	11,383	11,775
Mexico	2,872	1,791	19
Denmark	23	...	...
Germany (W.)	1,102	1,515	...
Netherlands	2	...	...
Spain	221	4,326	...
United Kingdom	...	...	298
Yugoslavia	2,175	4,214	882
Morocco	2,207	2,125	...
Australia	2,519	4,961	3,620
Other countries	...	...	3
Sweden	...	...	2,205
Total Imports:	24,307	54,881	33,596
Ore, base bullion, refined	24,307	54,881	33,596
Lead scrap, dross, etc. (cont.)	270	1,605	370
Antimonial lead & typemetal	177	...	475
Lead content thereof	135	...	448

OPA

	1939	1946	June 18
Electro., Del. Val.	11.20	14.375	31.50
P. W. Zinc (N. Y.)	5.05	8.25	12.00
F. o. b. Zinc (E. St. Louis)	5.05	5.05	11.00
New York, Del.	...	...	11.50
Tin, Spot Straits, N. Y.	...	...	104.50-Nom.
Aluminum ingot 99½% + 20.00	15.00	26.80	
Antimony (R.M.M. brand, f.o.b. Laredo)	12.36	14.50	29.00

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World Production of Copper

(American Bureau of Metal Statistics)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugo- slavia	India	Japan	Turkey	Aus- tralia	Northern Rhine- Westphalia (e)	Union of South Africa (d)
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(e)	(f-h)	(e)	(f)	(e)	(e)	(d)
1955															
Total	1,036,702	226,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,138,184	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
Dec.	95,285	35,592	5,446	43,765	4,786	21,786	1,424	9,607	3,207	810	13,038	2,114	4,388	42,459	4,672
Total	1,115,483	360,745	42,905	.....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,118	47,828
1957															
Jan.	94,735	32,841	5,372	41,578	3,990	23,790	1,554	7,909	3,000	348	12,345	2,091	4,334	42,996	4,285
Feb.	87,130	30,629	4,849	39,648	3,235	21,792	1,340	11,459	3,054	756	10,806	1,509	4,045	36,864	4,708
Mar.	90,326	34,190	5,954	40,205	3,497	25,181	1,689	9,559	6,023	821	10,196	2,580	5,555	44,847	4,781
April	86,123	32,655	6,101	16,115	4,030	23,286	1,463	9,884	3,149	788	8,515	2,942	6,220	41,396	4,413
May	80,628	32,471	6,141	23,264	3,481	24,643	1,636	7,095	2,967	788	9,806	2,574	6,229	41,615	4,488
June	71,092	32,418	5,984	34,811	3,105	23,128	1,674	7,414	3,102	769	10,617	1,810	6,819	44,447	4,018
July	64,444	31,181	5,995	40,495	3,780	24,448	1,616	9,091	3,245	801	10,762	1,136	6,139	44,010	3,324
Aug.	67,917	50,867	6,340	45,211	3,646	26,409	1,855	9,461	2,838	786	11,063	.....	6,220	42,000	4,974
Sept.	79,541	27,572	6,294	40,913	3,637	24,649	1,749	12,027	2,870	792	12,585	.....	17,291	4,726	
Oct.	92,214	22,572	5,380	47,230	2,950	16,181	11,225	3,616	809	13,310	.....	.....	.....	4,749	
Nov.	96,349	20,388	5,040	46,310	3,923	24,982	1,594	8,542	3,462	774	11,764	.....	25,612	4,249	
Dec.	77,641	19,023	5,066	46,284	3,196	25,569	1,597	9,042	2,929	832	15,054	.....	46,935	4,406	
Total	1,881,170	346,816	65,886	462,964	42,780	295,312	19,529	106,134	37,116	9,062	136,612	.....	426,513	.....
1958															
Jan.	95,542	24,669	5,342	44,579	3,115	25,945	1,724	7,356	3,685	679	17,385	.....	48,699	.....
Feb.	88,432	28,016	4,810	43,589	3,627	24,289	1,599	9,211	.....	557	11,388	.....	44,420	.....
Mar.	101,410	32,418	4,771	44,554	1,601	26,882	.....	8,654	.....	810	10,748	.....	51,630	.....
April	96,428	.....	5,201	.....	4,250	.....	.....	.....	.....	.....	17,938	.....	48,150	.....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i.e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e.g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugo- slavia	Japan	Aus- tralia (a)	French Morocco	Tunisia	Rhe- sodia	Total
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g)	(h)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1955																
Total	547,153	148,811	221,133	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,185
1956																
Total	613,293	147,865	218,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Dec.	50,500	12,504	19,465	6,951	8,191	7,512	17,215	4,231	5,460	7,846	5,785	24,095	4,173	3,123	1,568	180,412
Total	604,533	142,955	218,266	55,971	.....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,441	27,069	12,384	2,052,481
1958																
Jan.	47,665	12,672	20,144	6,188	8,375	7,501	18,017	4,013	5,297	6,042	4,974	25,518	3,323	1,785	1,232	173,922
Feb.	47,122	11,432	18,341	5,306	8,347	7,959	15,939	4,435	5,837	7,482	4,352	23,628	3,326	2,781	1,176	167,791
Mar.	49,441	12,827	18,465	6,899	8,778	7,890	16,548	4,597	6,392	8,600	4,336	26,359	3,375	1,174	1,204	171,654
April	40,984	11,785	21,099	5,626	8,917	8,885	15,144	4,652	6,281	7,021	3,481	19,876	2,338	2,394	1,204	160,946
May	47,487	12,212	21,005	5,421	9,058	8,339	16,327	2,402	6,944	7,482	3,541	25,035	3,532	2,978	1,204	174,355
June	44,636	12,706	17,846	6,255	8,264	7,977	15,194	3,677	6,408	6,469	3,461	22,979	2,906	3,127	1,232	164,278
July	38,827	7,175	18,815	6,880	8,548	8,319	11,229	4,581	6,327	6,872	3,567	21,563	2,767	568	1,232	147,624
Aug.	39,250	6,940	17,991	6,100	7,495	15	13,760	4,584	6,915	5,414	3,610	19,942	2,584	2,756	1,176	140,501
Sept.	43,269	10,908	21,266	5,192	7,849	8,202	15,700	4,367	5,692	6,942	3,587	22,632	2,184	2,369	1,120	158,285
Oct.	45,467	12,598	5,074	7,940	9,308	17,130	4,639	7,121	9,242	3,522	22,482	3,560	2,410	1,176	164,818	
Nov.	40,486	10,645	17,067	6,448	9,495	9,068	17,785	4,825	6,914	11,155	3,555	20,148	2,625	2,519	1,120	165,406
Dec.	44,042	11,076	20,902	5,344	10,342	10,351	18,370	5,101	7,069	11,212	3,769	21,492	4,002	2,779	1,120	179,309
Total	575,612	130,886	246,443	80,999	119,192	111,337	223,973	60,860	77,490	92,903	52,915	271,654	42,266	32,359	16,492	.....
1959																
Jan.	43,652	14,073	19,031	4,951	10,761	8,296	18,658	4,636	6,215	4,082	6,086	24,470	2,575	1,068	1,344	.....
Feb.	39,498	12,140	15,472	2,662	9,460	7,571	17,869	4,437	6,020	.....	6,474	22,037	2,319	1,765	1,344	.....
Mar.	39,238	.....	16,305	3,424	8,447	8,287	17,282	.....	6,196	.....	6,889	.....	1,705	2,429	1,344	.....
April	40,606	.....	16,621	4,988	.....	.....	.....	.....	.....	6,736	.....	.....	.....	.....	1,344	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

	United States	Can.	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Great Britain	Italy	Other lands	Nether- lands	Norway	Spain	Yugo- slovia	Japan	Aus- tralia (a)	Aus- tralia (b)	Rhe- sodia (b)	Total (d)
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
1955	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	96,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457		
1956																			
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383		
1957																			
Sept.	77,455	20,247	5,090	3,000	20,129	10,631	16,389	7,100	6,954	2,698	4,476	1,911	2,745	18,753	10,300	2,800	211,477		
Oct.	81,490	20,590	5,351	2,892	21,688	12,305	16,800	7,232	6,133	2,781	4,419	2,011	2,011	14,215	10,829	2,856	221,830		
Nov.	79,754	20,933	5,227	3,014	21,660	11,884	16,580	7,036	5,712	2,763	4,399	2,164	2,164	12,905	10,521	2,772	215,399		
Dec.	86,270	21,829	5,441	3,333	22,274	12,413	17,684	7,483	6,596	2,742	4,483	2,789	2,189	18,638	10,895	2,828	230,624		
Total	1,574,500	247,856	62,354	35,772	257,901	148,465	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,692,833		
19																			

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)
Virgin Zinc Zinc Conc.

At start	1958	1959	1958	1959
of:	1958	1959	1958	1959
Jan.	44,926	34,166	79,349	56,371
Feb.	43,308	34,805	82,125	58,518
Mar.	46,662	36,850	87,721	57,897
Apr.	46,608	38,457	84,631	52,151
May	47,251	38,643	80,964	47,936
June	50,539	....	74,470	....
July	49,613	....	71,553	....
Aug.	48,497	....	70,105	....
Sept.	45,590	....	63,909	....
Oct.	45,784	....	57,376	....
Nov.	39,341	....	53,371	....
Dec.	35,396	....	58,022	....

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)
Feb. Mar. Apr.

(Gross Weight)	1959	1958	1959
Zinc ore and conc.	972	6,156	4,583
Zinc conc.†	5,991	2,742	‡
Australia	5,524	2,155	...
Burma	467	535	...
Other countries	...	52	...
Zinc and zinc alloys:			
(Gross Wt.)	15,674	15,437	14,984
Rhodesia-			
Nyasaland	225	175	200
Australia	1,175	975	...
Canada	7,537	7,825	8,502
Belgium	1,583	1,484	1,196
Germany (W.)	...	801	125
Netherlands	275	719	700
Soviet Union	2,118	1,412	1,412
United States	855	8	290
Belgian Congo	500	500	825
Other countries	1,406	1,538	1,734
Zinc and zinc alloys:			
(Gross Wt.)	368	401	505

† British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period.

‡ Not available.

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)
Feb. Mar. Apr.

(Gross Weight)	1959	1958	1959
Copper unwrought			
—ingots, blocks, slabs, bars, etc.	9,465	5,901	5,002
Plates, sheets, rods, etc.	1,777	1,342	1,600
Wire (including insulated electric wire)	6,105	423	364
Tubes	907	1,013	1,326
Other copper, worked (including pipe fittings)	90	65	134
Total	18,344	8,744	8,426

Copper Consumption in United Kingdom

(British Bureau of Non-Ferrous Metal Statistics)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957					
Total	407,326	234,158	641,484	507,493	133,991
1958					
January	35,799	20,816	56,615	46,437	10,178
February	32,207	19,352	51,559	37,907	13,652
March	33,491	19,580	53,071	41,539	11,532
April	36,722	19,100	55,822	43,784	12,038
May	35,810	18,423	54,233	43,571	10,662
June	39,277	18,141	57,418	46,080	11,338
July	36,743	17,091	53,564	42,373	11,191
August	28,416	13,756	42,181	33,073	9,108
September	42,813	18,596	61,408	52,018	9,390
October	43,402	21,788	65,190	53,937	11,253
November	40,987	19,232	60,219	47,932	12,287
December	37,580	19,118	56,688	45,968	10,730
Total	442,977	225,001	667,978	534,619	133,359

* Includes copper sulphate effective October, 1954.

U. K. Virgin Copper Stocks Zinc Imports and Exports

By Principal Countries

(A. B. M. S.)

(In long tons)
(British Bureau of Non-Ferrous Metal Statistics)

Reported in pigs, bars, etc.; metric tons except where otherwise noted

At start of:	1958	1959	IMPORTS		
			Jan.	Feb.	Mar.
Jan.	59,614	91,477	14,951	6,807	16,005
Feb.	59,203	82,483	56	...	...
Mar.	62,120	89,147	1,373	780	...
Apr.	61,779	94,330	1,717	1,094	875
May	71,101	88,582	8,03	...	...
June	61,991	88,913	836	725	775
July	64,121	81,851	2,042	...	...
Aug.	81,146	84,756	3,050	340	227
Sept.	98,595	89,899	3,950	348	266
Oct.	100,815	85,092	4,064	2,181	1,716
Nov.	90,877	74,686	4,130	3,68	401
Dec.	81,657	69,023	3,048	3,143	...

EXPORTS		
U. S. (s.t.)	161	183
Canada (s.t.)	9,313	15,945
Belgium	11,637	...
Denmark	216	...
France	50	20
Germany, West††	1,657	...
Netherlands	2,731	1,138
Norway	3,950	...
Switzerland††	340	398
U. K. (l.t.)	1,300	368
Northern Rhodesia† (l.t.)	1,993	2,015
Australia† (l.t.)	2,244	1,744

† Includes scrap.

* Includes manufactures.

† British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

Tin Content of Tin in Ore	Tim Metal		
	Imports	Production*	Stock at end of period*
1957 Total	39,272	1,028	9,834
1958			
April	2,678	82	582
May	2,707	101	1,428
June	1,315	104	1,029
July	2,007	107	2,020
August	2,235	44	1,625
September	1,743	99	1,564
October	1,913	91	1,419
November	1,971	96	1,770
December	2,757	90	2,299
1958 Total	27,419	1,090	13,195
1959			
January	1,337	113	1,095
February	1,817	115	230
March	1,545	....	1,572

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

	(Refined Copper)			
	(In Tons)			
	1956	1957	1958	1959
Jan.	26,653	25,469	32,868	24,721
Feb.	26,229	21,861	28,668	28,016
Mar.	26,750	27,663	29,239	32,427
Apr.	26,617	27,398	30,635	32,028
May	27,626	29,086	32,471	....
June	27,122	24,093	32,418	....
July	27,250	27,195	31,131	....
Aug.	29,219	26,943	30,867	....
Sept.	27,950	24,633	27,546	....
Oct.	29,696	30,312	22,572	....
Nov.	27,346	27,331	20,368	....
Dec.	28,716	31,604	19,033	....
Year	331,174	323,588	346,816	....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)

(In Tons)

	1956	1957	1958	1959
Jan.	15,981	20,582	26,883	10,620
Feb.	11,041	16,272	16,816	10,304
Mar.	12,276	14,270	18,662	11,025
Apr.	14,476	16,417	23,261	17,079
May	12,851	19,048	19,358	....
June	10,985	10,826	20,831	....
July	13,599	18,621	21,703	....
Aug.	14,710	21,980	15,881	....
Sept.	17,268	14,314	15,373	....
Oct.	13,896	13,110	20,341	....
Nov.	19,130	16,622	14,391	....
Dec.	18,630	16,282	11,138	....
Year	174,843	198,794	224,638	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1956	1957	1958	1959
Jan.	16,002	14,032	17,117	17,118
Feb.	14,344	15,170	14,908	15,923
Mar.	16,857	16,940	15,421	17,389
Apr.	11,573	14,275	15,844	....
May	15,446	14,591	15,131	....
June	18,145	16,431	15,645	....
July	15,841	14,377	14,076	....
Aug.	16,104	14,679	12,260	....
Sept.	15,760	15,869	15,401	....
Oct.	16,725	14,151	14,564	....
Nov.	14,865	15,879	16,680	....
Dec.	16,056	15,296	18,248	....
Year	188,971	171,690	185,095	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Lead Exports

(Dominion Bureau of Statistics)

	(In Pigs)			
	(In Tons)			
	1956	1957	1958	1959
Jan.	4,888	8,946	4,752	5,034
Feb.	3,856	6,633	1,553	6,377
Mar.	4,007	7,044	9,497	11,831
Apr.	7,636	7,314	7,450	....
May	7,214	9,676	7,764	....
June	6,632	7,210	4,036	....
July	9,696	4,682	12,629	....
Aug.	4,713	6,416	7,232	....
Sept.	9,908	8,467	5,125	....
Oct.	9,072	7,761	10,320	....
Nov.	9,227	6,175	10,641	....
Dec.	2,734	4,217	11,352	....
Year	79,633	84,541	92,351	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

	(In ores and concentrates)		
	(Fine Ounces)		
	1957	1958	1959
Jan.	253,940	634,715	185,367
Feb.	380,463	208,149	329,742
Mar.	521,849	350,827	425,973
Apr.	431,646	284,971	....
May	523,228	376,082	....
June	468,559	438,253	....
July	844,545	529,770	....
Aug.	811,530	279,511	....
Sept.	861,857	583,570	....
Oct.	432,000	323,475	....
Nov.	263,273	217,892	....
Dec.	186,569	871,573	....
Year	5,979,459	5,098,788	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

	(Refined Zinc)			
	(In Tons)			
	1956	1957	1958	1959
Jan.	21,696	20,340	21,801	21,456
Feb.	20,356	19,808	19,743	19,709
Mar.	22,010	21,941	22,314	22,135
Apr.	21,339	20,504	20,989	....
May	21,790	20,564	21,269	....
June	20,780	19,928	20,353	....
July	21,691	20,061	20,873	....
Aug.	21,354	20,305	21,152	....
Sept.	20,691	20,247	20,530	....
Oct.	21,412	20,892	21,125	....
Nov.	20,470	20,933	20,273	....
Dec.	22,012	21,823	21,705	....
Year	255,607	247,351	252,157	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

	(In Tons)			
	1956	1957	1958	1959
Jan.	14,985	16,609	16,710	8,047
Feb.	14,997	15,027	15,896	12,616
Mar.	15,504	16,733	15,853	14,922
Apr.	14,431	15,347	15,163	15,493
May	15,203	16,225	15,231	....
June	14,492	15,447	14,603	....
July	15,125	15,878	12,851	....
Aug.	14,852	16,756	12,597	....
Sept.	14,530	15,604	11,786	....
Oct.	15,762	15,628	3,682	....
Nov.	15,062	14,587	3,178	....
Dec.	14,824	15,096	3,298	....
Year	178,767	188,962	140,842	....

METALS, JUNE, 1959

Canadian Copper Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959		
	Feb.	Mar.	Apr.
Ore, matte, regulus, etc.			
(content)	2,476	2,625	2,013
United States	469	230	883
Norway	391	2,095	1,053
United Kingdom	11	51	77
Japan	1,605	249	...
Ingots, bars, billets, anodes	10,304	11,025	17,079
United States	2,705	3,707	4,171
Brazil	66	49	95
Belgium	280	...	831
France	840	1,176	1,232
Germany (W.)	728	728	784
Italy	84	...	...
United Kingdom	5,404	5,308	9,907
India	28	...	...
Japan	110	...	...
Other countries	59	57	59
Total Exports:			
Crude & refined	12,780	13,650	19,092
Old and scrap	190	466	430
Rods, strips, sheet & tubing	358	576	798

Canadian Zinc Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959		
	Feb.	Mar.	Apr.
Ore (zinc content)	12,675	14,617	12,789
United States	12,675	14,617	12,789
Slab zinc	15,945	22,731	7,690
United States	3,376	11,519	3,352
Brazil	220	110	221
Chile	77	...	83
Denmark	336	112	...
Germany (W.)	56	...	56
Netherlands	784	896	...
United Kingdom	11,132	9,600	3,573
Korea	270	...	...
Hong Kong	56	...	249
Taiwan . . . . .	...	...	22
India	244	...	...
Other countries . . . . .	...	...	22
Total Exports:			
Ore and slabs	28,620	37,348	20,479
Zinc scrap, dross, ashes	64	48	124
Japan . . . . .	...	25	...

French Copper Imports

(A. B. M. S.)

	(In metric tons)		
	1959		
	Feb.	Mar.	Apr.
Crude copper for refining (blister, black and cement)	813	11	813
United Kingdom . . . . .	...	11	...
Belgian Congo	813	...	813
Refined	14,451	16,927	21,455
United States	5,437	5,229	10,796
Canada	1,270	1,885	816
Belgium	4,878	5,839	4,746
Germany (W.)	148	112	145
Norway . . . . .	...	305	153
United Kingdom	40	..	22
Belgian Congo	1,212	1,652	2,558
Rhodesia-Nyasaland	1,466	1,905	2,219

METALS, JUNE, 1959

Canadian Lead Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	1959		
	Feb.	Mar.	Apr.
Ore (lead content)	2,091	3,355	3,241
United States	2,091	3,355	3,241
Refined lead	6,376	11,831	7,836
United States	859	4,811	3,624
Uruguay . . . . .	...	88	102
Netherlands	56	...	...
United Kingdom	5,393	6,658	2,576
Japan	24	...	...
Taiwan . . . . .	...	44	132
Korea . . . . .	...	223	...
Other countries	44	7	58
Denmark . . . . .	...	...	1,232
Thailand . . . . .	...	...	112
Total Exports:			
Ore & refined	8,467	15,186	11,077
Pipe and tubing	3	3	...
Lead scrap	48	206	49

Copper Imports and Exports By Principal Countries

(A. B. M. S.)
Reported in ingots, slabs, etc., metric tons except where otherwise noted.

	IMPORTS		
	1959		
	Jan.	Feb.	Mar.
U. S. (blast, s.t.)	30,419	21,844	23,636
(ore, etc., s.t.)	9,931	5,377	8,932
(ref., s.t.)	2,862	3,548	3,815
Belgium†	18,061	...	...
Denmark	838	412	...
France (crude) . . . . .	...	813	11
(refined)	17,451	14,451	16,927
Germany, West	25,627	...	...
Netherlands	1,781	3,051	1,375
Norway	32	...	...
Sweden	4,821	...	...
Switzerland	2,741	2,169	3,018
U. K. (l.t.)	39,960	31,432	44,291
India (blister/-refined, l.t.)*	2,631	3,829	...
EXPORTS			
U. S. (ore and unref., s.t.)	1,079	618	401
(refined, s.t.)	22,196	20,816	19,404
Canada (refined, s.t.)	10,620	10,304	11,025
Belgium†	12,767	...	...
Finland‡	530	610	...
Germany, West	4,359	...	...
Norway	3,590	...	...
Sweden	865	...	...
U. K. (l.t.)	7,835	9,465	5,901
Turkey†	2,016	...	...
No. Rhodesia (blast & ref., l.t.)*	41,058	30,601	38,405

* Includes alloys.

† Includes old.

‡ British Bureau of Non-Ferrous Metal Statistics.

Canada's Nickel Exports

(Dominion Bureau of Statistics)

	(Refined in oxides, matte, etc.)		
	(In Tons)		
	1957	1958	1959
January	14,260	14,233	6,767
February	9,974	12,157	7,976
March	14,958	12,316	14,006
April	18,671	20,962	18,213
May	18,351	20,574	...
June	14,539	16,144	...
July	14,181	14,055	...
August	14,966	13,012	...
September	14,160	14,371	...
October	13,370	8,335	...
November	16,620	3,001	...
December	14,606	5,060	...
Year	178,656	154,220	...

French Zinc Imports

(A. B. M. S.)

	(In metric tons)		
	1959		
	Feb.	Mar.	Apr.
Ore (gross weight)	23,864	18,315	13,974
Greece	1,565	...	860
Italy	369	1,548	3,602
Norway	651	355	...
Yugoslavia	5,108	...	...
Algeria	6,776	6,896	3,237
Morocco	9,395	4,552	4,411
Tunisia . . . . .	...	...	1,864
Belgian Congo	3,867	...	...
Australia . . . . .	...	1,097	...
Slabs, bars, blocks, etc.	1,094	875	1,451
Belgium	915	633	1,360
Germany (W.)	118	50	...
Italy	51	182	91
Algeria	10	10	...

French Metal Exports

(A. B. M. S.)

	(In metric tons)		
	1959		
	Feb.	Mar.	Apr.
LEAD			
Ore (gr. wt.)	247	1,055	704
Pig lead	1,554	2,631	1,032
Uruguay	30	90	...
Denmark	457	559	203
Germany (W.)	540	330	654
Sweden . . . . .	...	508	...
Switzerland	505	245	50
United Kingdom . . . . .	...	762	...
Other countries	22	137	125
Antimonial lead	257	253	52
COPPER			
Crude copper for refining (blister, black and cement)	60	...	...
ZINC			
Slabs, bars, blocks, etc.	20	...	...

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

	(In tons of 2,240 lbs.)		
	1959		
	Feb.	Mar.	Apr.
(Gross Weight)			
Copper and copper alloys	31,432	44,291	36,627
Rhodesia-Nyasaland	16,752	21,883	15,882
Canada	3,778	8,074	7,489
Belgium	3	4	2
Germany (W.)	30	38	23
Norway	200	400	200
Sweden	1	...	1
United States	4,120	4,276	2,605
Chile	6,275	9,350	10,150
Belgian Congo	250	250	250
Other countries	23	16	25
Of which:			
Electrolytic	20,339	28,675	25,659
Other refined	3,375	5,230	4,870
Blister or rough	7,644	10,319	6,000
Wrought and alloys	74	67	98
Total	31,432	44,291	36,627

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Alu-	Copper	Magn.	Zinc	Lead
	minum		nesium		Die
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957					
Sept.	58,692	70,804	2,279	47,736	2,115
Oct.	64,140	81,836	2,192	62,332	2,481
Nov.	58,898	70,187	1,920	58,689	1,590
Dec.	53,102	65,708	1,533	49,597	1,399
Total	751,856	875,389	30,322	663,330	23,791
1958					
January	57,845	69,707	1,881	50,658	1,566
February	50,695	58,356	1,803	42,687	1,294
March	50,547	60,157	1,975	39,719	1,630
April	44,948	59,311	2,215	35,796	1,467
May	44,093	57,506	2,422	36,447	1,655
June	40,701	57,124	2,205	38,132	1,971
July	38,818	51,124	2,200	32,765	1,394
August	45,034	57,790	1,869	35,860	1,804
September	52,796	64,447	2,804	47,127	1,725
October	55,699	74,012	2,627	45,045	1,708
November	55,793	62,476	2,615	48,431	1,409
December	59,487	67,905	2,612	55,600	1,497
Total	596,816	739,915	27,228	508,297	18,920
1959					
January	62,927	66,874	2,151	53,347	1,571
February	62,486	69,589	2,162	48,779	1,285

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census)

	(Thousands of Pounds)				
	Total	Sand	Mold	Die	All Other
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957					
Aug.	71,233	64,953	3,278	799	2,203
Sept.	70,804	64,470	3,243	870	2,221
Oct.	81,836	74,391	3,693	1,057	2,695
Nov.	70,187	63,944	3,006	882	2,375
Dec.	65,708	59,606	3,046	888	2,168
Total	875,389	789,819	44,746	10,776	30,048
1958					
January	69,707	63,294	3,327	894	2,192
February	58,356	52,579	3,202	796	1,779
March	60,157	54,007	3,395	823	1,932
April	59,311	53,271	3,385	949	1,705
May	57,506	51,634	3,077	891	1,904
June	57,124	51,967	3,001	839	1,317
July	51,124	46,636	2,351	792	1,345
August	57,590	52,981	2,425	682	1,702
September	64,447	58,435	2,888	876	2,248
October	74,012	67,564	3,239	790	2,419
November	62,746	57,386	2,604	810	1,946
December	67,905	61,119	3,535	1,059	2,192
Total	739,985	667,255	36,529	10,201	22,681
1959					
January	66,874	59,856	3,572	1,216	2,230
February	66,589	62,593	3,557	1,176	2,263

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included

(Cents per pound)

	1956	1957	1958	1959
Jan.	64.50	74.00	74.00	74.00
Feb.	64.50	74.00	74.00	74.00
Mar.	64.50	74.00	74.00	74.00
Apr.	64.50	74.00	74.00	74.00
May	64.50	74.00	74.00	74.00
June	64.50	74.00	74.00	74.00
July	64.50	74.00	74.00	74.00
Aug.	64.50	74.00	74.00	74.00
Sept.	64.50	74.00	74.00	74.00
Oct.	64.50	74.00	74.00	74.00
Nov.	64.50	74.00	74.00	74.00
Dec.	72.48	74.00	74.00	74.00
Aver.	65.165	74.00	74.00	74.00

Platinum Averages

N. Y. MONTHLY QUOTATIONS

(Dollars per Troy Ounce)

	1956	1957	1958	1959
Jan.	106.30	101.92	77.85	52.57
Feb.	104.34	98.59	74.82	59.25
Mar.	104.23	93.50	72.096	77.10
Apr.	103.92	93.45	70.72	77.18
May	105.23	92.865	67.34	77.50
June	106.50	92.02	66.18	77.50
July	106.50	90.265	64.35	77.50
Aug.	105.76	84.428	60.94	77.50
Sept.	105.50	84.00	59.60	77.50
Oct.	104.85	84.00	57.327	77.50
Nov.	104.50	83.80	56.41	77.50
Dec.	104.50	78.70	53.154	77.50
Aver.	105.18	89.79	65.07	77.50

Spot Straits Tin

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1956	1957	1958	1959
Jan.	105.036	101.511	92.94	99.411
Feb.	100.803	101.132	93.915	102.785
Mar.	100.786	99.643	94.452	103.042
Apr.	92.268	99.304	92.988	102.505
May	96.994	93.347	94.512	103.125
June	94.589	98.05	94.708	....
July	96.143	96.52	94.892	....
Aug.	99.049	94.261	94.988	....
Sept.	103.809	93.406	94.101	....
Oct.	106.023	91.838	96.523	....
Nov.	110.921	89.236	99.118	....
Dec.	104.268	92.35	98.989	....
Aver.	101.475	96.301	95.177	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1956	1957	1958	1959
Jan.	104.768	101.347	92.653	99.351
Feb.	100.586	100.257	93.763	102.708
Mar.	100.524	99.476	94.363	103.042
Apr.	99.145	99.286	92.988	102.505
May	96.853	98.335	94.512	103.107
June	94.488	98.025	94.619	....
July	96.131	96.44	94.892	....
Aug.	98.924	94.159	94.976	....
Sept.	103.559	93.313	94.054	....
Oct.	105.716	91.848	96.455	....
Nov.	110.329	89.236	98.985	....
Dec.	104.00	92.34	98.96	....
Aver.	101.252	93.672	95.069	....

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb Flask

	1956	1957	1958	1959
Jan.	277.80	256.00	224.35	219.50
Feb.	270.29	256.00	229.39	219.50
Mar.	261.40	256.00	232.096	223.57
Apr.	267.22	256.00	233.06	239.52
May	267.675	256.00	229.48	245.86
June	260.69	256.00	229.00	....
July	256.06	256.00	230.25	....
Aug.	256.00	252.20	240.27	....
Sept.	256.00	248.58	241.12	....
Oct.	255.92	234.48	235.94	....
Nov.	255.13	228.33	230.05	....
Dec.	256.00	226.50	223.54	....
Aver.	261.71	248.51	230.96	....

METALS, JUNE, 1959

Primary Aluminum Output, Shipments and Stocks

	Stocks beginning of month short tons	(U. S. Department of Interior)			Stocks end of month short tons
		Production short tons	Sold or Used Short tons	Value f. o. b. plant	
1957					
Total	.....	1,647,714	1,579,035	.....	.....
1958					
January	171,142	139,910	134,983	\$69,837,103	176,069
February	176,069	121,980	118,608	61,426,895	179,441
March	179,441	134,019	123,461	63,341,320	189,999
April	189,999	124,999	127,608	63,222,858	187,390
May	187,390	126,357	130,160	62,816,641	183,557
June	183,557	115,326	130,787	63,091,679	168,096
July	168,096	118,541	134,083	64,726,335	152,554
August	152,554	125,416	132,765	64,611,494	145,205
September	145,205	124,714	146,870	71,641,275	125,049
October	124,274	139,836	139,908	68,881,146	124,202
November	124,202	140,962	126,619	62,133,129	138,545
December	138,545	152,201	145,125	70,946,494	145,721
1959					
January	146,086	156,700	127,678	\$62,375,824	175,108

Virgin Aluminum

Ingot (30 lb.)	99½% Plus, Delivered	Monthly Average Prices		
(Cents per pound)				
1956	1957	1958	1959	
Jan.	24.40	27.10	28.10	26.80
Feb.	24.40	27.10	28.10	26.80
Mar.	24.60	27.10	28.10	26.80
Apr.	25.90	27.10	28.10	26.80
May	25.90	27.10	28.10	26.80
June	25.90	27.10	28.10	26.80
July	25.90	27.10	28.10	26.80
Aug.	26.70	28.10	28.77	26.80
Sept.	27.10	28.10	28.80	26.80
Oct.	27.10	28.10	28.80	26.80
Nov.	27.10	28.10	28.80	26.80
Dec.	27.10	28.10	28.80	26.80
Aver.	26.008	27.517	26.889	26.889

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS (Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
		1,542,368	365,391	812,311	35,854
1955 Total	2,805,500				
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
November	186,974	114,618	31,501	64,197	1,716
December	177,520	96,078	21,363	54,672	1,480
Total	2,677,423	1,396,502	399,040	789,430	26,187
1958					
January	193,678	108,616	21,915	57,188	1,538
February	207,459	118,835	21,983	58,296	1,927
March	190,092	108,913	20,692	55,973	1,533
April	210,477	118,793	22,178	62,737	1,954
May	217,299	115,660	27,361	67,376	2,389
June	228,587	118,767	28,674	74,580	2,248
July	229,654	126,160	24,678	72,194	2,642
August	213,548	115,376	23,581	67,953	3,154
September	231,168	125,937	23,287	75,269	2,665
October	254,023	128,967	24,442	85,038	2,163
November	216,249	121,190	17,771	71,666	1,723
December	235,377	130,474	26,253	72,979	1,806
Total	2,624,911	1,441,385	285,355	821,249	25,742
1959					
January	235,463	132,361	26,480	70,309	2,246
February	230,733	131,564	21,740	71,364	2,028
March	272,922	161,339	21,981	82,610	2,519

Magnesium Wrought Products Shipments

(Bureau of Census)

	(Thousands of Pounds)			
	1956	1957	1958	1959
Jan.	2,188	2,130	1,271	1,271
Feb.	1,901	2,522	1,280	1,691
Mar.	1,946	2,388	1,398	1,717
Apr.	2,279	2,511	1,479	1,479
May	2,462	2,230	1,443	1,443
June	2,302	1,881	1,709	1,709
July	2,002	1,428	1,227	1,227
Aug.	2,523	1,540	1,823	1,823
Sept.	2,031	1,501	1,807	1,807
Oct.	861	1,453	1,983	1,983
Nov.	2,141	1,230	1,662	1,662
Dec.	2,452	1,102	1,622	1,622
Total	24,975	21,915	18,702	18,702

Aluminum Castings Shipments

(Bureau of Census)
BY TYPE OF CASTING

	Total	Permanent Mold	Die	All Other
		Thousands of Pounds)		
1954 Total	609,066	155,738	213,968	6,800
1955 Total	833,058	171,757	298,115	8,282
1956 Total	801,036	171,763	245,421	7,736
1957				
November	58,898	10,411	18,611	29,793
December	53,102	9,302	16,724	26,978
1957 Total	751,656	144,121	232,326	369,086
1958				
January	57,845	10,724	18,082	28,937
February	50,695	9,601	15,456	25,579
March	50,547	9,311	15,255	25,918
April	44,948	9,531	13,369	21,956
May	44,093	9,312	13,648	21,091
June	40,701	8,644	13,679	18,292
July	38,818	8,658	12,342	17,714
August	45,034	9,034	14,426	21,505
September	52,796	10,261	16,241	26,254
October	55,699	10,932	17,189	27,511
November	55,793	10,539	16,942	28,264
December	59,487	10,874	18,970	29,579
Total	596,790	117,421	186,949	292,599
1959				
January	62,927	10,907	20,606	21,349
February	62,846	10,627	21,127	31,021

Cadmium Averages

N. Y. Monthly Averages Cents per lb. in ton lots

	1956	1957	1958	1959
	Jan.	170.00	170.00	155.00
Feb.	170.00	170.00	155.00	145.00
Mar.	170.00	170.00	155.00	145.00
Apr.	170.00	170.00	155.00	120.00
May	170.00	170.00	155.00	120.00
June	170.00	170.00	155.00	155.00
July	170.00	170.00	155.00	155.00
Aug.	170.00	170.00	155.00	155.00
Sept.	170.00	170.00	152.60	152.60
Oct.	170.00	170.00	145.00	145.00
Nov.	170.00	170.00	145.00	145.00
Dec.	170.00	166.40	145.00	145.00
Aver.	170.00	169.70	152.30	152.30

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies				Calculated weekly production, all companies (net tons)
	OPEN HEARTH	BESSEMER	ELECTRIC	TOTAL	
1954 Total	80,327,494	73.6	2,548,104	53.2	88,811,652 71.0 1,693,741
1955 Total	102,840,585	91.6	3,227,997	67.4	9,147,567 81.2 116,216,149 89.0 2,203,828
1956					
November	7,674,698	79.9	134,709	36.4	885,512 59.0 8,392,919 76.5 1,256,391
December	6,782,262	68.3	108,337	28.3	528,686 51.7 7,420,286 65.5 1,678,798
Total	101,657,776	87.0	2,475,128	54.9	8,582,082 71.3 112,714,996 84.0 2,161,776
1957					
January	6,085,124	58.6	121,328	35.5	847,450 44.8 6,753,912 56.1 1,524,585
February	5,252,112	56.0	81,597	26.4	448,614 40.6 5,782,373 53.6 1,445,581
March	5,598,944	53.9	122,317	35.7	582,361 43.6 6,254,622 52.3 1,412,000
April	4,875,619	48.5	109,438	33.1	847,939 46.3 5,682,991 47.8 1,289,741
May	5,602,123	58.7	110,366	32.3	588,870 48.2 8,301,169 52.7 1,422,384
June	6,378,942	63.4	85,215	26.6	860,413 55.8 7,127,480 61.6 1,661,417
July	5,712,587	55.0	114,218	33.4	593,600 48.6 6,420,406 53.7 1,452,580
August	6,481,815	62.4	134,138	39.3	670,382 54.8 7,286,003 61.1 1,644,696
September	6,769,660	67.8	103,194	31.2	787,518 62.3 7,610,372 65.8 1,778,124
October	7,795,541	75.0	145,458	43.4	875,779 71.5 8,817,278 75.8 1,990,469
November	7,672,555	75.3	145,867	44.1	860,896 71.9 8,569,318 74.1 1,997,510
December	7,764,000	74.7	117,000	34.2	832,000 68.1 8,793,000 72.9 1,971,000
Total	75,888,392	62.0	1,396,348	34.7	8,972,828 56.4 86,257,363 69.1 1,636,162
1958					
January	8,280,958	77.1	120,005	39.5	729,675 63.7 9,317,385 74.8 2,103,247
February	8,540,000	88.0	129,000	47.0	757,000 73.1 9,608,000 84.8 2,401,000
March	10,216,474	95.1	184,892	60.9	929,784 81.1 11,567,745 92.3 2,611,229
April	9,884,332	95.0	196,000	66.2	964,850 87.0 11,281,920 93.0 2,629,818
May	10,118,000	94.2	201,000	66.2	1,024,000 89.3 11,600,000 92.5 2,619,000

Blast Furnace Output

(American Iron and Steel Institute)

Pig Iron	net tons			Total Capacity	%
	Pig Iron	Forgings & Spikes	Manganese		
1950	64,810,272	678,896	65,484,168	91.6	
Tu. Yr.	70,487,880	745,881	71,888,761	98.8	
1951	61,888,668	629,930	62,188,891	84.8	
1952	74,987,721	855,938	75,842,759	85.8	
1953	88,119,882	888,788	88,888,117	71.6	
1954	77,114,078	888,788	77,888,821	92.7	
1955	8,878,964	59,584	8,982,648	88.7	
Sept.	6,977,457	56,614	7,036,091	100.1	
Dec.	7,268,743	65,841	7,334,584	101.0	
Total	75,301,134	664,341	75,965,475	88.9	
1956	7,209,547	72,826	7,282,373	98.8	
Feb.	6,596,133	61,973	6,658,106	100.0	
Mar.	7,179,100	67,779	7,246,879	98.3	
Apr.	8,810,102	60,784	8,670,886	96.3	
May	6,879,881	65,566	6,945,447	94.2	
June	5,593,326	66,266	6,659,382	93.3	
July	6,625,901	66,031	6,691,332	90.8	
Aug.	6,719,763	61,988	6,781,751	92.0	
Sept.	6,569,074	58,837	6,627,911	92.9	
Oct.	6,654,450	65,028	6,519,478	88.4	
Nov.	5,711,242	66,637	5,779,879	81.0	
Dec.	5,212,624	69,175	4,854,444	62.8	
Total	78,567,011	782,666	79,339,671	91.4	
1957	4,785,269	69,175	4,854,444	62.8	
Jan.	4,016,276	47,953	4,064,229	58.2	
Mar.	4,618,778	45,175	4,463,983	57.8	
April	3,877,907	39,302	3,827,209	51.2	
May	4,048,328	25,468	4,073,796	52.7	
June	4,396,285	26,463	4,422,748	89.1	
July	4,277,515	26,668	4,304,188	85.7	
Aug.	4,799,955	31,374	4,851,329	62.1	
Sept.	5,041,042	31,348	5,072,390	67.8	
Oct.	5,855,995	36,963	5,872,958	76.0	
Nov.	5,907,888	39,275	5,946,163	79.5	
Dec.	6,025,385	47,505	6,072,890	78.6	
Total	57,298,644	465,456	37,298,644	63.5	
1958	6,260,595	48,572	6,211,823	77.9	
Feb.	6,047,398	45,274	6,182,672	85.3	
March	7,461,760	48,291	7,510,061	93.4	
April	7,338,372	54,234	7,392,666	95.0	
May	7,683,759	64,237	7,747,996	96.4	

Galvanized Sheet Shipments

(American Iron & Steel Institute)

1956	1957	1958	1959	—Hot Dipped—			
				1958	1959	1958	1959
Jan.	269,464	235,902	186,649	279,244	31,465	30,304	474,859
Feb.	272,997	206,048	167,627	281,637	29,451	24,602	397,861
Mar.	291,193	206,830	185,885	311,961	36,794	46,706	419,102
Apr.	266,728	198,585	206,388	328,759	43,670	54,906	465,568
May	272,741	206,657	231,318	—	37,628	—	689,998
June	279,058	239,037	277,180	—	402,521	—	—
July	274,447	239,889	239,889	—	42,860	429,761	—
Aug.	276,048	186,790	238,263	—	45,451	422,776	—
Sept.	256,803	183,952	228,723	—	46,037	464,439	—
Oct.	278,637	212,886	290,157	—	43,217	525,739	—
Nov.	255,185	190,350	233,900	—	60,261	768,361	—
Dec.	239,173	159,563	266,472	—	14,596	115,134	—
Total	2,957,991	2,392,637	2,828,848	—	16,842	150,942	—

* Combined with August figures.

Shipments of Tin-Terneplate

(American Iron & Steel Institute)

1956	1957	1958	1959	—Electrolytic—			
				1958	1959	1958	1959
Jan.	31,465	30,304	474,859	417,210	—	—	—
Feb.	29,451	24,602	397,861	442,625	—	—	—
Mar.	36,794	46,706	419,102	597,408	—	—	—
Apr.	43,670	54,906	465,568	689,998	—	—	—
May	37,628	—	402,521	—	—	—	—
June	42,860	—	429,761	—	—	—	—
July	45,451	—	422,776	—	—	—	—
Aug.	46,037	—	464,439	—	—	—	—
Sept.	43,217	—	525,739	—	—	—	—
Oct.	60,261	—	768,361	—	—	—	—
Nov.	14,596	—	115,134	—	—	—	—
Dec.	16,842	—	150,942	—	—	—	—
Total	447,396	—	5,040,198	—	—	—	—

Steel Ingot Operations

(Percentage of Capacity as Reported by

American Iron & Steel Institute)

Week

Beginning	1956	1957	1958	1959
Jan.	97.6	98.4	56.1	76.2
Feb.	98.6	96.4	57.0	73.6
Mar.	99.0	96.6	55.5	74.6
Apr.	100.4	97.6	54.0	72.6
May	100.4	97.6	54.0	72.6
June	100.2	97.7	50.5	73.5
July	100.5	97.0	47.8	94.2
Aug.	100.9	97.7	48.5	93.3
Sept.	100.0	97.1	53.1	90.3
Oct.	100.0	93.8	52.4	92.0
Nov.	100.6	93.5	52.5	92.9
Dec.	100.6	92.4	50.6	92.9
Jan.	100.9	96.6	48.6	93.2
Feb.	100.2	97.7	50.3	93.3
Mar.	100.5	97.0	47.8	93.5
Apr.	100.2	97.7	48.7	93.5
May	100.5	97.0	46.8	92.0
June	100.3	96.7	48.0	92.0
July	100.5	97.7	53.4	93.3
Aug.	100.2	93.4	45.2	92.9
Sept.	100.0	93.0	40.0	61.7
Oct.	100.0	84.9	78.5	51.0
Nov.	100.2	84.0	78.7	53.4
Dec.	100.2	12.3	78.7	53.4
Jan.	120.722	94,717	26,005	—
Feb.	103,297	79,708	23,589	—
Mar.	106,233	82,195	24,038	—
Apr.	91,464	69,121	22,343	—
May	87,002	66,086	20,916	—
June	92,681	71,624	21,237	—
July	68,802	48,618	10,184	—
Aug.	80,886	59,816	21,070	—
Sept.	85,277	64,586	20,691	—
Oct.	95,389	73,367	22,022	—
Nov.	85,267	65,788	19,479	—
Dec.	103,800	81,360	22,440	—
Total	1,114,939	859,125	255,814	—
1959	—	—	—	—
Jan.	105,392	82,693	22,709	—
Feb.	110,280	86,013	24,267	—
Mar.	131,317	103,848	27,469	—
Nov.	110.6	82.6	70.4	—
Dec.	7...101.8	82.8	71.6	—
Oct.	14...100.9	80.9	74.2	—
Sept.	21...101.4	80.2	74.8	—
Oct.	28...101.2	79.7	75.0	—
Nov.	4...101.3	78.0	74.5	—
Dec.	11...100.6	77.7	74.5	—
Nov.	18...100.2	76.0	74.1	—
Nov.	25...100.1	72.1	73.7	—
Dec.	2...101.1	71.5	73.5	—
Dec.	9...101.3	69.2	73.5	—
Dec.	16...102.0	67.7	74.5	—
Dec.	23...94.3	53.7	74.5	—
Dec.	30...97.3	59.0		

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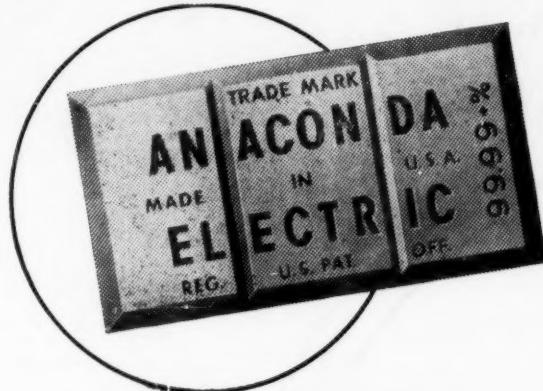
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